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A Non-Linear Approach to Modelling
Motivation in the Workplace Using Artificial
Neural Networks

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Abstract

A Non-Linear Approach to Modelling Motivation in the Workplace Using Artificial Neural Networks. Jean-Michel Jaquet. January 2012.

Introduction: The standard business conception of the employee is as a blank slate machine motivated through a behaviourist system of reward and punishment. In contrast to this conception, studies of human evolution, neurology and cognition suggest that motivation emerges from the interaction of a complex and non-linear system of variables. This two-part study uses a conceptual model of work motivation based on systems and complexity theory to identify and interpret the significance of outlying variables in the motivations of groups of working professionals with different career orientations.

Methods: In the first part of the fieldwork, fifty respondents from each of four career orientations (business managers, professional creative artists, entrepreneurs and students studying in creative fields) completed a self-assessment tool in which they indicated their strength of agreement or disagreement with the presence of fifteen motivation variables in their pursuit of a work goal. The responses of each career group were clustered using artificial neural network analysis and outlying motivation variables within clusters that differed significantly from the mean were identified. In the second part of the fieldwork, the meanings of outlying variables were interpreted by focus groups representing each of the four different career orientations.

Results: While on average, respondents agreed that all motivational variables were fulfilled in their pursuit of a work goal, unsupervised artificial neural network clustering identified between two and four clusters of respondents within each career group that showed responses differing significantly from the mean. These were mainly in the form of disagreement with fulfilment of one or more variables of motivation. Focus groups were able to identify with and provide context to these outlying responses.

Conclusion: As an academic contribution, the study shows that artificial neural network clustering of motivational variables can be used as a non-linear alternative to reductionist methods in visualizing diversity within the motivational systems of groups of working professionals. As a practical contribution, the study shows that managers, educators and policy makers seeking to influence the motivations of groups may wish to consider not only the homogenized motivations of the whole but also outlying patterns in motivation that can point to high leverage methods of improving motivation in diverse workforces.

Key Words: Work Motivation; Artificial Neural Networks; Complexity; Systems Theory; Diversity

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“The ultimate aim of production is not production of goods, but the production of free human beings, associated with one another on terms of equality.”

John Dewey, 1916

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Introduction

In the world of classical economics, work motivation is primarily a function of financial reward. The reality of motivation is far more complex. We have all experienced factors including relationships with co-workers, perceptions of leaders and expectations of future possibilities influencing our decisions to apply for or stay in a particular job. Such factors seem to affect not only our willingness to show up for work but also the quality of performance we bring to it. For organizations, getting the alchemy of motivation right can mean the difference between dispirited employees going through the motions to collect a pay cheque or engaged workers who actively collaborate in creating the success of a business.

Creating more “people friendly” workplaces is important not only for corporate profits but also for the wellbeing of the people who drive them. The notion of sacrificing fulfilment at work in order to reap the benefits after hours has helped to contribute to the social and ecological imbalances of a world in which values of acquisition, competition and domination are often used as replacements for values of community, contribution and an intrinsic satisfaction in creating or delivering a useful product or valuable service.

The opportunity exists to define a new conceptual model of the relationship between employee and employer. A model based, not on abstract economic theory or industrial revolution-era design, but on a realistic understanding of human psychology and business needs as they emerge in the 21st Century. Factors driving this opportunity include:

Changing Business Imperatives: Since the industrial revolution, the business world has focused on factors of growth as main measures of business success. These include growth in profits, growth in share value, growth in size and growth in market dominance. These factors have been pursued with such skill that the business world now faces a new challenge of diminishing natural resources and disrupted ecosystems - by-products of its own ‘success’. Companies are pressed to adopt a set of practices and values that lead towards balance and sustainability not only in their use of resources but also the lives of their customers, suppliers and employees.

A new understanding of human psychology: While scientific understanding of human motivation has undergone several revolutions over the course of the last two hundred years, the practice of motivating people in the workplace has not similarly evolved. Instead it retains its roots in an out-dated and factually flawed conceptual model of human psychology. Renovating the practice of workplace motivation to correspond with current research findings in the psychological sciences has the potential to provide gains to both sides of the employee - employer relationship.

Changing needs of employers: An increase in the number of jobs that involve knowledge work requires employees who think independently, work creatively and who can collaborate with co-workers, customers and suppliers in complex ways. Motivating and enabling this kind of behaviour requires a different approach to that required in motivating the performance of simple mechanical tasks.

Increased worker mobility and changing social values: Knowledge workers have more choice in employment than in the past and job or career changes are common. At the same time, people are placing a greater emphasis on how their work contributes – not only to their wallets – but also to their sense of personal purpose, health, social connectedness and lifestyle. This shift places a greater burden on employers to be innovative in attracting and retaining staff.

In applying a more realistic model of human behavioural psychology to the task of motivating people in their work, organizations stand to tap into a source of underutilized discretionary effort - effort outside of the formal requirements of a position - that workers can choose to contribute or withhold. At the same time, quality of life can be improved for all of us who are faced with the daily challenge of constraining a psychology that evolved to meet atavistic challenges, into the patterns of behaviour demanded by modern commercial realities.

The goal of this thesis is to arrive at a conceptual model of human motivation in the workplace that more accurately reflects the complex realities of human psychology and better enables organizations to visualize and respond to the diverse needs of their employees. It is my hope that such a model may contribute to the on-going challenge of creating workplaces that inspire; human beings who feel more connected to themselves and to each other and products and services that better meet all our needs.

Chapter 1

The Philosophy of Human Motivation

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Chapter 1

The Philosophy of Human Motivation

Human behaviour is a complex phenomenon. The variety of approaches from which it has been studied reflects this complexity. These include Biology and Neurology (James, 1890; Yerkes and Dodson, 1908; Lieberman, 2001); Needs or Drives (Murray, 1938; Hull, 1940; Maslow, 1943; McClelland, 1953); Learning and Conditioning (Skinner 1969); Cognition (Festinger, 1951; Heider, 1958; Locke and Latham, 1990); Evolutionary Adaptation (Fodor, 1975; Tooby and Cosmides, 1985; Buss, 1995) and Neurological Functioning (Sapolsky, 1998; Lieberman, 2001).

No single approach yields a complete framework for or “unified theory” of human motivation. Theorists have, at different times, claimed that one or another aspect of human psychology should be considered a dominant factor in an understanding of human behaviour. At different stages of the development of the psychological sciences, certain of these claims have had more popular support from the psychological community than others, however all claims have proven incomplete. Environmental forces have played a role in influencing which theories have been accepted or discarded. Such factors (with examples of present day trends) are:

- Political conditions (the rise of democracy; the promotion of human rights)
- Economic conditions (dissolving class barriers; changing relationships between employers and employees; shift to knowledge economies, globalization)
- Technological conditions (digital technology, rapid communication systems; brain scanning and genetic decoding techniques)
- Philosophical conditions (religious pluralism; freedom of choice, an end to the concept of mind body dualism)
- Conditions of scholarship (holism vs. reductionism; Newtonian causality vs. complex interrelationship)

To properly understand present day theory and practice of human motivation it is necessary to first understand how this theory and practice evolved over time. This review begins then with a description of how human nature and behaviour was viewed by philosophers from Classical Greek, Reformation and Enlightenment times as well as philosophical concepts influencing the scientific conception of motivation in the 21st Century.

1.1. The History of Human Motivation in Philosophy

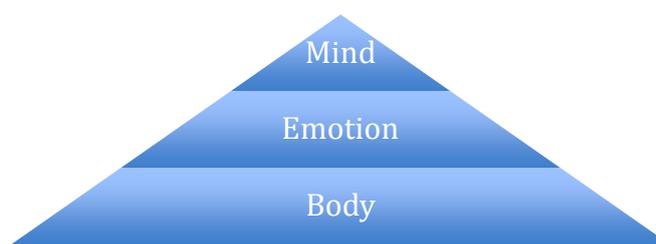
1.1.1. Theory of Human Motivation from Classical Greece through the Middle Ages

Classical Greece saw the earliest systematic application of a process that was to evolve into scientific method. In their writing and oratory, philosophers put forward theses that were challenged through analysis and debate (Honderich ed., 1995). They were among the first scientists whose topics of inquiry included epistemology, ethics and the question of how a person should live. Arising out of these inquiries came theories of the nature of the human mind and motivation – early psychological theory (Long, 2006).

The philosopher Socrates introduced a concept central to a debate about the origins of human motivation that continues to this day – the concept of mind-body dualism (Plato cited in Jowett, 1932). He argued that humans are composed of two co-existing but separate entities – the body and the mind. According to Socrates, the body is a source of base appetites (like lust or greed) and the mind is a source of higher virtues (like reason or temperance). He reasoned that if there is an impulse of thirst that drives a person to drink (emerging from the body) – there must be a counteracting force that drives them away from drinking (mind). To Socrates, mind is a metaphysical phenomenon, a by-product of a soul that has descended to the earth (Plato cited by Guthrie, 1960).

Plato expanded on his teacher's division between mind and body, envisioning a "tripartite" structure of human psychology (Plato cited in Jowett, 1932). The new component added by Plato sits between base passion and higher reason and is called "emotion" although it differs from a 21st century understanding of emotion. Plato's emotion represents a "higher" form of impulse that he considers has the potential to act as a guide towards wisdom. He related these three "tiers" to divisions of classes in society – suggesting that ordinary workers are motivated by base appetites, soldiers or policemen by emotions and the ruling class by reason or mind.

Figure 1. The Platonic Conception of Human Psychology



Plato's successor Aristotle is sometimes credited as the first true psychologist (Shields, 2003). Like Socrates and Plato, Aristotle saw mind as immaterial – separate from body. He introduced the idea that humans are shaped over time by their actions and that motivation can be influenced by learning – an idea that would be expanded upon in the mid 20th century through the science of behaviourism (Skinner, 1976). Aristotle also touched on the possibility of a cognitive component of motivation in his suggestion that the perceptions of an individual would influence their subjective evaluation of phenomena in the world and so influence their assessment of the meaning of those phenomena. (Cofer and Appley, 1964: 958).

Philosophical study of human behaviour in the Classical period slowed down when the authoritarian governance of the Roman Empire impacted the climate of humanist scholarship in Greece (Russell, 1945). The eventual decay of the Roman Empire saw a decline in Classical traditions of scholarship and a growing prominence of organized religion as a source for answers to scholarly questions. This period is often called the Middle Ages and stretched some 1100 years of human history from the 5th to 16th Centuries (Tierney and Painter, 1998). During the Middle Ages, theological studies were recognized as the most prestigious of academic pursuits (Southern, 1990). Modern academia does not often look to scholarship of the Middle Ages given that period's dependence on metaphysical ideas rather than empirically verifiable data (Festinger, 1989; Feynman et al 1997, Dawkins 2002). Religion of the time did however substantially influence conceptions of human motivation and the relationship of the individual to their work.

Christianity, Judaism and Islam, those Western religions with the largest current day following, all share a common monotheistic "Abrahamic" heritage. (Noss and Grangaard,

2007). Each holds a conception of human beings as having been created by a metaphysical being and deriving their motives from that creation. Each differs somewhat in its view of the inherent nature of the human being – be it “good”, “sinful” or some combination of both, yet all suggest that conscious discipline is necessary in order to draw out a human being’s better nature and avoid their lesser one. The nature of these disciplines was made explicit during the Middle Ages as rules laid out by religious texts or decreed by religious bodies (McGrade, 2003). The free will of humankind then was to choose to follow the rules or abandon them with ill consequence. The overarching difference between the temperance of man’s nature suggested by Classical Greek philosophy and that suggested by the Abrahamic religions of the Middle Ages is that between conscious exercising of reason and wisdom as opposed to submission to pre-ordained law - between individualism and authoritarianism. It was the desire for a break from authoritarian states and religious bodies that drove the later Renaissance and the return to philosophies of individualism and “humanism” (Craig, 1998).

1.1.2. Theory of Human Motivation from the Reformation to the Enlightenment

In the mid 1600’s the Peace of Westphalia brought an end to the religious wars of the Middle Ages. European States were granted the right to choose their religion and individuals living within a particular religious zone were guaranteed the right to practice their own choice of faith (Hankins, 2007). Religious pluralism and increased political stability opened the way for the Reformation – a questioning of the absolute authority of the Church. German theologian Martin Luther championed individualism above central control in the practice of faith and proposed that the church was in need of reformation. Rather than having truth dictated to one, he observed that each man could be his own priest (McKim ed. 2003). The Reformation paved the way for the Renaissance, a renewed interest in reason and the scientific method of inquiry rather than faith and divine revelation. Four major innovations in the study of human motivation emerge during this period:

a) Humanism and Rationalism

Challenging scriptural authority was a movement termed ‘Humanism’. Humanism champions the individual’s capacity to find meaning through their own process of inquiry rather than state or secular institutions (Craig, 1998). The best way of seeking

this meaning was considered to be a process rational inquiry - giving rise to the movement known as 'rationalism' (Audi ed. 1999).

b) Newtonian Physics

In the late 16th Century, Isaac Newton put forward a concept of "natural law" in contrast to law defined by God (Newton, 1687). Newton saw the universe as being composed of innate laws that could be deduced by observation and reason and without reference to metaphysics. At the heart of these laws is the notion of cause and effect between physical bodies (Cohen and Smith, 1987). Newton's ideas prompted philosophers and later psychologists to seek the natural "causes" of human behaviour – including innate, biological drivers.

Thomas Hobbes, a Renaissance philosopher, applied a cause and effect paradigm to human behaviour. According to Hobbes, internal and external pressures act upon the human body to determine the direction of motivation – in the same way that a force might act upon a physical body to achieve movement (Hobbes, 1651). Another important offshoot of Newtonian cause and effect thinking was Spinoza's concept of determinism in human behaviour and the absence of free will. Spinoza believed that behaviour is influenced by unconscious qualities. An action cannot then always be chosen – but increased awareness of the drivers of actions can enable better control of circumstances (Spinoza, 1677).

c) Subjectivity of Experience

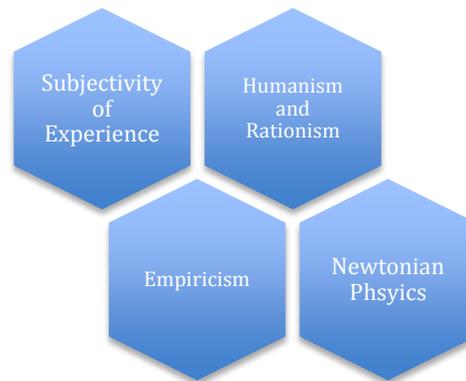
Renee Descartes put forward the idea that the senses can be deluded and that rational deduction is therefore the only method of perceiving truth (Descartes, 1637). The philosopher Francis Bacon built on this idea, cataloguing what he considered to be specific errors of judgment that can give rise to sensory delusions including: 'Idols of the Tribe' (cultural distortions); 'Idols of the Cave' (inherited distortions); 'Idols of the Marketplace' (socially formulated distortions) and 'Idols of the Theatre' (distortions arising from philosophical systems) (Bacon, 1620).

d) Empiricism

Empiricism is founded upon the concept that human ideas are formulated only from information received via the senses (Craig, 1998). John Locke, a key figure in the founding of empiricist thinking believed that each human being is born into the world

as a Tabula Rase – a Blank Slate (Locke, 1690). According to this theory, humans lack innate ideas and any that they may form are the result of their experiences.

Fig 2. Reformation and Enlightenment Contributions to the Study of Human Psychology



The Reformation gave way to a period termed “The Enlightenment”, a time of intense questioning of religious and state authority as well as increased emphasis on an approach to understanding natural law through the senses and application of reason. During this time several philosophical concepts, important to the understanding of human behaviour were put forward. Rousseau outlined his idea of the ‘Noble Savage’ – suggesting that a human being’s natural state is one of purity and that it is their learning enforced by society that corrupts them (Rousseau, 1762). George Berkeley, an Empiricist like Locke, suggested that sensory information should be cleansed of all distortions that arise through the human processing of those perceptions (Honderich ed. 1995). Emmanuelle Kant united the schools of rationalism and empiricism by suggesting that knowledge might originate from sensory experience – but not necessarily ultimately arise from experience (Guyer, 2007). Today, evolutionary psychologists look at experience as a result of an interaction between sensory inputs and evolved adaptive responses hardwired in the brain (Tooby and Cosmides, 1992).

1.1.3. Theory of Human Motivation from the 19th to the 21st Centuries.

The Empiricism and Rationalism of the Enlightenment expanded into state and scholarly institutions opening the way for the formation of what are today known as the sciences. Psychology as a science was formally established in 1879 (Freedheim and Weiner, 2003). A review of motivation theory then must continue with the science of psychology. However,

certain philosophical concepts introduced in 19th and 20th century philosophy continue to influence the science of human motivation in the 21st century:

a) Relativism, post structuralism and post-modernism

The concept of relativism dates back to Classical Greek times and Protagoras' statement that "man is the measure of all things" (King, 1993). It suggests that each dimension of human experience is contingent upon some other dimension. For example, one's experience of sexism in the workplace is contingent upon one's identity as a man or a woman, a secretary or a manager. Relativists do not believe in an objective reality – but rather a variety of subjective experiences each of which is valid within its context. (<http://plato.stanford.edu/entries/relativism/> accessed 10/05/2008). Objectivity in research as advocated by the underlying philosophy of 19th and 20th century science is deemed impossible by hard line relativists who believe that a simple conscious commitment to such objectivity cannot remove the influence of mental models, unconscious motivators and other factors from the process of defining hypotheses, conducting experiments and interpreting results.

Related to Relativism is the idea of Post Structuralism. Structuralism was popularized during the 1950's as an approach to understanding the underlying frameworks of complex phenomena like the human mind through a scientific empirical process (Benjamin, 2007). It reflects the view that the elements that compose the mind are not susceptible to being objectively defined. Post Structuralism (not to be confused with the Post Structural Psychology of Willhelm Wundt) is the idea that any such definition is necessarily subjective and contingent upon the qualities of the person doing the defining (Honderich, 1992).

These philosophies are united under a banner of Post Modernism – an intellectual movement that challenges some of the basic tenets of Enlightenment thinking – rationalism and empiricism (Honderich, 1992). Ideas of relativism, post-structuralism and post-modernism are important to the study of human motivation because they introduce a challenge to the ascendancy of ideas of empiricism and reductionism that had their origins in the theories of Newton, Hobbes and Locke. They call into question the structuralist notion that a subject like that of human behaviour can be described in an objective fashion.

b) The Limitations of Reductionism

Central to Enlightenment era thinking was the idea that phenomena could be broken down into sub-categories with each being studied as a separate component of a larger whole. The practice of reductionism meshed with the ideas of empiricism and Newtonian causality to yield an image of a clockwork universe the secrets of which could be exposed through increasingly more refined study of its components. However certain limitations of reductionist science based on ideas of Newtonian causality are apparent:

- i) Reductionism is best suited for studying linear systems while many natural systems are non-linear.

A linear system is a system in which an input has a corresponding equal output. The idea that physical systems are linear has a history dating back to classical Greece. (Guthrie, 1960) and later to Isaac Newton (Newton, 1660) yet research in physics during the 20th century has shown that most physical systems are in fact non-linear (Capra, 1996). Non-linear systems exhibit qualities different from those attributed to linear systems. David Bohm explains that in the context of physics, non-linear systems are not subject to laws of Newtonian causality and are characterized by non-locality of connection. In other words, particles within a non-linear system can exhibit connection across large distances (Bohm, 1961).

According to the biologist Francisco Varela, non-linear systems exhibit the following features:

- Small causes can have large effects.
- Deterministic equations can lead to unpredictable results due to feedback in a system.
- Change does not have to be related to external causes but can be the result of self-organization internal to a system.

(Varela, 1993)

When systems are removed from a real world context for study they become separated from the contingencies that might otherwise influence them, yet these contingencies can be key to an understanding of the whole. An awareness of this

limitation is encouraging new approaches to scientific thinking in certain fields. As Goerner puts it: “the nonlinear revolution is about shifting our sense of how things work from models based on excruciatingly limited and idealized systems (linear, independent, closed, equilibrium) to lessons learned from the most common types of systems, non linear, interdependent ones” (Goerner, 1995: 20).

ii) Reductionism presupposes that a process of reduction will adequately describe complex phenomena.

The Greek philosopher Aristotle observed: “the totality is not, as it were, a mere heap, but the whole is something besides the parts” (Aristotle, 360BC). The failure of reductionism to adequately describe complex systems in the real world can be found across domains. Linguist and political theorist Noam Chomsky points out that “Science studies what’s at the edge of understanding, and what’s at the edge of understanding is usually fairly simple. The reason why physics can achieve such depth is that it restricts itself to extremely simple things, abstracted from the complexity of the world. Human affairs are way too complicated... So the actual sciences tell us virtually nothing about human affairs” (Chomsky, 2006: 1)

Scientific philosopher Daniel Dennett uses the term “Greedy Reductionism” to describe attempts to reduce the complexity of a whole to simple parts that - when added together - do not adequately represent that whole (Dennett, 1995). Certain psychologists consider behaviorist theorists of the mid 20th century to have been greedy reductionists in their effort to explain all human behavior as conditioned responses (Glaser, 1999; Maslow, 1943; Fishbein, 1957). They argue that to properly understand human behavior, conditioned responses as well as biological drives, evolved adaptations and cognitive processes must be considered. Goerner observes: “Human psychology has not yielded to reductionist aims... perhaps because nature is more complex”. That, “We try to explain brain function by using the known laws of physics and chemistry. On the other hand, most of us are equally impressed by the unpredictability of individual performance within the lawful regularities of behavior” (Goerner, 1995: 31). Reduced explanations of complex phenomena fail to describe their totality and in so doing, diminish the relevance of related theory.

iii) Reductionism presupposes simplistic principles of causality and can misattribute outcomes to causes

Plato observed that one “ought not to attempt to cure the eyes without the head, or the head without the body, so neither ought you to attempt to cure the body without the soul; and this... is the reason why the cure of many diseases is unknown to the physicians of Hellas, because they are ignorant of the whole, which ought to be studied also; for the part can never be well unless the whole is well understood” (Plato, 400BC). Modern science has a history of seeking simple causes to complex problems. By isolating phenomena for study, diverse influencing factors are excised and their significance may be lost. Attributing simplistic causes through a process of reductionism goes against the emerging understanding of physics and the observation that the new physics provides laws of probability, not laws of certainty. That these probabilities constitute the ultimate knowable reality beyond which there is no room for further reduction (Bohm, 1961).

iv) Reductionism presupposes an objective observer

A pitfall of using symbols to describe observed phenomena is that those symbols can come to be perceived as universally constant and applicable rather than the chosen interpretations that they are. The philosopher Heraclitus observed: “a man cannot step into the same river twice” (Heraclitus, 500BCE). Similarly, classification of a phenomenon can never apply to any but that particular phenomenon in a particular moment in time. Not only are symbolic forms not universal, they are also relative. Each time a phenomenon is translated into symbolic form, the process of interpretation carries with it the expectations, judgments, intentions and other qualities of the observer. Psychological theory shows that non-conscious processes substantially influence human awareness (Jung, 1912; Freud, 1923). Cognitive and evolutionary scientists show how the organic design of the brain can directly affect perceptions and cognitions (Cosmides, Tooby, 1987; Pinker, 1997). Social scientists show how culture, gender, social background and other issues influence perception of events, giving rise to the notion of 'relativism' (Craig, 1998).

c) Advantages of Holism

While conclusions arrived at through the classical scientific method of falsifiable hypothesis and reductionist experimentation are considered by some scholars to have superior value to those arrived at through other means (Popper, 1959), a holistic approach is adopted by others in their effort to better understand complex phenomena (Honderich, 1992). Holism follows from the idea that the whole is greater than the sum of its parts and that holistic approaches to understanding complex phenomena are available as an alternative to reductionist approaches. The practice of holism lacks the detail complexity of reductionism in seeking to define and focus on parts but better reflects the dynamic complexity of phenomena in reflecting the dynamics that characterize a system.

Despite the proven usefulness of both reductionist and holist paradigms, a schism remains in the sciences between them. To researchers dedicated to the search for causes, the vagueness of multiple influencers without empirical evidence of causation can seem unscientific. To those who view the limitations of reductionism as crippling when dealing with complexity, holism offers a practical approach to dealing with real world problems. Steven Pinker, the noted evolutionary theorist argues that attacks on reductionism are motivated less by a particular philosophy of science than an emotional distaste for the idea of a clockwork universe (Pinker, 2002). Philosopher Daniel Dennett argues that the quest for non-reductionist science is an attempt to salvage a sense of higher purpose in life (Dennett, 2006). The idea is that an avoidance of reductionism is a retreat into unsubstantiated opinion or at worst, mysticism. On the other side of the debate, systems theorist Stafford Beer comments in an introduction of Varela and Maturana's "Autopoiesis and Cognition" that reductionism is "an iron maiden in whose secure embrace scholarship is trapped. A man who can lay claim to knowledge about some categorized bit of the world, however tiny, which is greater than anyone else's knowledge of that bit is safe for life: reputation grows, paranoia deepens. The number of papers increases exponentially, knowledge grows by infinitesimals, but actual understanding of the world actually recedes, because the world really is an interacting system" (Varela and Maturana, 1980: 64). The psychologist Carl Jung similarly argues for alternatives to classical scientific method as an approach to studying the psychological sciences saying that "anyone who wants to know the human psyche will learn next to nothing from experimental psychology. He would be better advised to abandon exact science, put away his scholar's

gown, bid farewell to his study, and wander with human heart through the world. There... through the experience of passion in every form in his own body, he would reap richer stores of knowledge than text-books a foot thick could give him, and he will know how to doctor the sick with a real knowledge of the human soul” (Jung, 1912: 246-247). Systems theorist Fritjov Capra suggests that the reductionist paradigm yielded a “self assertive” mode of thinking and value setting. Alternatively, the holist paradigm is “integrative”. The table below reflects this shift in values:

Table 1: Reductionist and Holist Thinking and Values (Capra, 1996: 10)

Thinking		Values	
<i>Self Assertive</i> (<i>Reductionist</i>)	<i>Integrative</i> (<i>Holist</i>)	<i>Self Assertive</i> (<i>Reductionist</i>)	<i>Integrative</i> (<i>Holist</i>)
Rational	Intuitive	Expansion	Conservation
Analysis	Synthesis	Competition	Cooperation
Reductionist	Holistic	Quantity	Quality
Linear	Nonlinear	Domination	Partnership

1.2. Summary and Analysis of Theory of Human Motivation in Philosophy

Philosophical paradigms provide the context within which human motivation has been studied. An empiricist of the Enlightenment, a rationalist of the Renaissance, a religious scholar of the Middle Ages and a 21st century neurologist all approach the study of human motivation from different perspectives. This is in part because each has their philosophical notions of an appropriate method for pursuing truth. From a relativist perspective, understanding these paradigms of researchers is as important as understanding their findings.

Classical Greece saw the ideological origins of modern scientific method and the study of human psychology. Ideas put forward in the philosophies of Socrates, Plato and Aristotle that continue to occupy the attention of 21st Century philosophers and psychologists include:

- Mind / body dualism
- Conscious and unconscious dimensions of motivation
- The potential for the senses to deliver false information
- The influence of learning on motivation
- The influence of social factors on motivation
- A cognitive dimension to motivation

Following the end of the Middle Ages, Renaissance and Enlightenment philosophers introduced a new set of principles by which human psychology and motivation might be studied. These principles laid the foundation for the modern scientific method from which the sciences were born. It became accepted that human behaviour should be studied empirically on the basis of evidence through a process of experimentation. Enlightenment philosophers further expanded upon this concept with the idea of a clockwork universe composed of inter-related parts that could be de-constructed in order to understand its workings. This idea gave rise to efforts to study and describe human motivation as a structure through the study and categorisation of human behaviours including studies of psychology, psychiatry and neurology.

20th and early 21st Century philosophy introduced concepts of relativism, post-structuralism and subjectivity to processes of analysis and understanding. It also cast doubt upon the potential of the mechanistic Newtonian conception of the universe established during the Enlightenment to provide an adequate description of reality. Holism, as an approach to understanding, calls for phenomena to be studied in all of their complexity without seeking to reduce them to component parts.

Table 2: Middle Age and Enlightenment Perspectives on Human Motivation

A summary of how philosophical concepts relating to the study of human motivation evolved from the Middle Ages through the Enlightenment

Middle Age Concept	Enlightenment Re-formulation	Proponents	Implications for the Philosophy of Human Motivation
Knowledge passed from a divine source through prophets and scripture.	Knowledge gained through rational deduction of natural laws.	Newton, Spinoza, Descartes, Locke, Bacon, Hobbes, Galilei	Human motivation contains naturalistic principles that can be uncovered through interrogation.
Ideas accepted “on faith”	Empirical evidence supports beliefs.	Locke, Berkeley, Hume.	Human nature must be studied empirically
Phenomena ordained by divine will.	Cause and effect relationship between phenomena governed by natural law.	Newton, Hobbes, Spinoza.	Seek underlying natural laws of human motivation.
The senses are a direct reflection of reality.	The senses can provide false information.	Descartes, Bacon.	Seek means by which to assure the legitimacy of beliefs

Table 3: Enlightenment and Information Age Perspectives on Human Motivation

A summary of how philosophical concepts relating to the study of human motivation has changed from the Enlightenment age into the 21st Century.

Enlightenment Age Concept	Information Age Re-formulation	Proponents	Implications
Absolutism	Relativism	Protagoras; Feyerabend; Kuhn.	Avoid a combative approach to knowledge creation. Seek the integration of views to achieve an approximation of the whole.
Objectivity of Experience - There is a single objective reality that can be universally described	Subjectivity of Experience - The qualities of a phenomenon are dependent on the qualities of the observer.	Protagoras; Nietzsche; Kierkegaard	Make transparent the qualities of the observer that influence the observation.
Reductionism as a method for understanding all universal phenomena	Holism as a method for modelling complex non-linear phenomena	Bohm; Varela; Maturana	Seek to include diverse variables in arriving at a representation of the whole rather than a summary of its parts.

Chapter 2

Theory of Human Motivation in the Psychological Sciences

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Theory of Human Motivation in the Psychological Sciences

Building on philosophical ideas of empirical reductionism, Wilhelm Wundt founded the first formal institution of psychology in 1879 (Viney and King, 1993). Wundt applied scientific principles, developed in the studies of physics, chemistry and biology, to understanding the human mind. The years since have seen an explosion in formal psychological research. Towards the end of the 20th century, the American psychological association recognized 58 distinct fields of psychology, each with their own theories and areas of focus (Hunt, 1993). Certain scholars have suggested that the approach of their particular school offers a “unifying theory” of psychology (Skinner, 1965; Pinker, 2002). Despite these claims, the landscape of psychology – reflected by its theories, practitioners and institutions - remains fragmented. A unified theory of psychology is elusive. This fragmented diversity presents both challenge and opportunity to the researcher. Opportunity in the wealth of information that has arisen out of research conducted from a variety of paradigms. Challenge in how to assimilate this complex diversity into a coherent picture. Building this picture requires understanding some of the drivers of complexity in the study of human motivation:

- a) Differing starting points for research and resulting theoretical divides.

Chapter one discussed the concept of relativism - and the idea that researchers bring their own perspectives to their work. Given its complexity, the study of human behaviour is susceptible to the influence of the personality traits, valences and philosophies of the researcher. A neurologist tends to see behaviour through a lens of synaptic processes, a psychotherapist through developmental experiences and a cognitive psychologist through mental processes. Given the complexity of phenomena under observation and the limited understanding of the biological, cognitive or environmental interactions that give rise to them, it is difficult to prove that any of the popular approaches is more valuable than another. Research on obesity for instance has

suggested that behavioural factors play a role – as in the case of genetically identical twins that have greatly differing body weights (Stice, Presnell, Shaw and Rodhe, 2005). However also that neurological functions can influence eating habits – as in the case of individuals who have a part of their brain damaged and change their eating patterns as a result (Ahlskog and Hoebel, 1973).

b) Differing objectives of research

A researcher's approach to the processes of research is formed within the framework of their own unique objectives. Some seek to produce a unified framework of human motivation that explains all behaviours in all circumstances (Pinker, 2002). Others seek only to understand specific factors like the influence of external forces on behaviour (Skinner, 1965) or practical solutions to ending chemical dependencies, or changing violent behavioural patterns. Differing objectives of researchers multiply the complexity of analysing their findings.

c) Differing methods of research

There is a lack of consensus about the best methodological approach from which to study human psychology. For much of human history, the mind was viewed as insubstantial, defying any kind of measurement. Today, brain-scanning techniques are allowing neurologists to identify areas of the brain associated with certain mental functions. Researchers like William James and Sigmund Freud recognized a mind body connection, but believed that scientific capacity to understand that connection was limited – that “introspection” or phenomenological evidence should be the preferred research methodology (Freud, 1923). Others like Pinker advocate a focus on a biological paradigm (Pinker, 2002).

d) Social, political and technological forces

Social and political forces influence the sciences. Whether was is the shift to authoritarianism that put an end to the tolerance of inquiry that characterized Classical Athenian Greece or the political compromises that led to the Renaissance, external factors influence how phenomena are studied. Victor Frankl observed that each generation has its psychotherapy. A “collective neurosis” or existential vacuum that must be filled by the adoption of a new approach to sense making (Frankl, 2006). This suggests an endless evolution of theory to meet the psychological needs of the times.

Despite the difficulties of assimilating these multiple points of view, effort must be made to do so. To this end, the most prominent approaches from which human psychology has been studied since the advent of the psychological sciences are next described. These fall under the loose headings of:

- Biology (Evolutionary Psychology; Psychiatry; Neurology)
- Needs (Humanistic Psychology)
- Learning (Behavioural Psychology)
- Cognition (Cognitive Psychology)

2.1. Early Studies of Biology and Motivation

Since Classical Greek times, philosophers have posited a connection between the mind and the body. It was only in the 16th century however that the philosopher Renee Descartes first considered that the centre of the mind might be the physiological organ of the brain. As a result of this idea, Descartes dissected human brains to seek a better understanding of their physiology (Benjamin, 2007). The study of human psychology through physiology gained momentum during the 18th and 19th centuries through the pioneers of neuropsychology (Hunt, 1993). Phrenologists associated skull structure with personality traits. Muller (1801 – 1858) looked at how sensations become representations in the human brain. Helmholtz, Webber and Fechner continued exploring the physiological connections between mind and body (Hunt, 1993). The acceptance of Darwin’s theories of biological evolution further stimulated an exploration of the biological motivations of behaviour resulting in the development of the first major biological theory of motivation – “Instinct Theory”.

a) Instinct Theory

Instinct theory suggests that humans are motivated by biological impulses or “instincts”. According to William James, instincts are ‘reflexes’ elicited by sensory stimuli (James, 1890). The sight of an animal running will trigger the hunting ‘instinct’ that will lead to a pattern of hunting behaviour. James suggests that humans have several instincts including: fear, cleanliness, jealousy, parental love, sympathy and modesty (Petri, 1995). Since James’ time, motivation theorists have included basic instinctual forces as motivators in their theories, among them, one of the most celebrated psychologists of

the 19th century, Sigmund Freud (Franken, 2001). A chief argument against instinct theory however arose with the criticism that the definition of particular “instincts” was arbitrary. Some theorists posited only a handful of supposedly innate instincts while others suggested dozens or more (Kuo, 1921). With the introduction of behavioural theory it became clear that innate pre-programmed forces could not account for all behaviours but that some involved a component of learning. Two people with different experiences in their past would be influenced differently by environmental triggers. Today the use of the term ‘instinct’ to describe human behaviour is no longer common among psychologists (Petri, 1995).

b) Arousal Theory

Arousal theory was another early biological theory of motivation that put forward the idea that the human organism exists on a continuum of arousal from un-aroused (a state of sleep) to highly-aroused (anger, violence) (Yerkes and Dodson, 1908). Yerkes and Dodson demonstrated that as an individual becomes more aroused (enthusiastic for example), performance increases. If an individual becomes “too aroused” (angry for example), performance decreases. This led to the idea that there is an optimal state of arousal for performance. Arousal theory has been criticized for a lack of empirical evidence of the relationship Yerkes and Dodson describe (Petri, 1995). It could not be conclusively proven that levels of emotional arousal have such influence on behaviour.

c) Freudian Theories of Biological Motivation

Freud believed that human behaviours are the result of biological influences and supported evolutionary theory (Freud, 1964). Yet Freud also contended that the sciences were not sufficiently sophisticated in their understanding of human anatomy to pursue a study of the biological origins of behaviour. Hence, for Freud, human behaviour was to be explored in psychodynamic terms (Hunt, 1993). Throughout his writing however, the biological origins of motivation are favoured over social, perception or learning influences (Viney and King, 1993). Freud studied what he perceived to be layers of consciousness lying in between basic drives of 'libidos' and 'thanatos' (life and death drives) and took a Newtonian view of mind (Sulloway, 1979). He observed that various biologically driven behaviours are considered socially inexpressible and so the mind finds ways to satisfy motivational energy in different ways. Freud called this energetic transfer “cathexis” and the suppression of impulses

“repression” (Hunt, 1993). He posited the existence of a need to transfer energy – so if a person is angry with someone but cannot express that anger directly they could transfer that energy by punching a wall. He theorized a range of strategies people use to deal with a need for cathexis including repression; projection; regression and reaction formation. While Freud had a profound influence on the study of psychology in his time he was also criticized for overgeneralization, lack of empirical evidence, dogmatism and sexual emphasis (Viney and King, 1993). Certain theorists of the time broke away from Freud to form their own movements including Adler, Jung and Otto Rank (Hunt, 1993).

d) Medical Psychology and Psychiatry

There is a growing trend in the 21st Century towards the unification of previously separate fields of biological medicine and human psychology (D’Esposito, 2003). Drivers of this trend include advances in technologies that allow clearer analysis of electrical impulses and chemical interactions within the human brain as well as an increasing understanding of the role genes play in biology and behaviour. Psychiatry was for some time a bridge between the medical study of neurology and psychology (Carlson, 2005), when it was found that medical interventions could positively influence patients with serious mental problems. However the study of psychiatry remained focused on particular psychological pathologies as opposed to explorations of topics like human motivation or perception. Modern neurologists study ways in which the brain functions to store or transmit information and to control the human organism (Kolb, 2003). In recent years, neurologists have made significant strides in linking brain functioning to human behaviour, promising the opening of new avenues for the study of complex human behaviours or motives from a neurological perspective (Carlson, 2005).

As biological exploration of human psychology becomes more popular and the genetic origins of human biology better understood, the momentum behind the study of evolutionary psychology is growing. While neurologists seek to explain how the brain works it falls to evolutionary theorists to describe how the brain may have evolved to promote certain behaviours (Buss, 1995). In between the early discredited theories of biological psychologists and the present day popular theories of neurologists and evolutionary psychologists however lay nearly a century of research into human motivation through paradigms of need, behaviourism and cognition.

2.2. Need, Humanism and Motivation

With early instinct and arousal theories falling short in describing the full variety of human behaviours, a collective of psychologists adopted a “humanistic approach” to the study of psychology, emphasizing practical issues like personal growth and self-actualization in their research. From this movement came generalized theories of psychological “needs”. The following are theories of need that found a following in the psychological sciences:

a) Murray’s Psychogenic Needs

Henry Murray sought to determine whether all human behaviour could be explained in terms of basic needs. He defines a need as: “a potentiality or readiness to respond in a certain way under certain circumstances” (Murray, et al. 1938, p. 124). Murray distinguishes between primary needs – biologically based needs for food, water, air, sex and avoidance of pain – and secondary needs for achievement, recognition, acquisition, dominance, aggression, autonomy and information. He suggests that the strength of a need contributes to the frequency and intensity with which it is expressed. Murray believed that needs could support or reinforce each other or alternatively, conflict. A need for material comfort could be augmented by a need for power but detracted from by a need for social acceptance. He also believed that environmental factors play a role in how needs are expressed calling such factors “presses” (Murray, 1938). Murray’s theory of needs opened the way for other researchers to speculate on the natures and interactions of human needs and gave rise to one of the most commonly quoted theories of human motivation – Maslow’s hierarchy of needs.

b) Maslow’s Hierarchy of Needs

Maslow studied high performing people – believing that the study of only mentally unhealthy individuals would lead to the development of an unhealthy psychological science (Maslow, 1943). Maslow placed human needs in a hierarchy with some needs requiring fulfilment before others could be met. For instance only once basic biological needs like hunger or security have been met would the individual aspire to the fulfilment of “higher” needs like social relatedness. Maslow describes the most basic needs as being physiological – needs for shelter, food and sleep. Once these needs are met the individual will seek to meet a need for safety or security. Social belonging and love are one step higher on the scale followed by a need for achievement and the respect of a peer group. Finally he describes “self actualization”, a state of transcendence of the self

that Maslow ascribes to great leaders (Maslow, 1943). In 1976, Wahba and Bridwell conducted a study that found little evidence for the ranking of needs that Maslow suggests.

c) Acquired Needs Theory

Dave McClelland augmented Maslow's work by suggesting that needs are shaped over time and can be socially learned (McClelland, 1953). He defined three categories of needs possessed in different strengths by different people:

- **Achievement:** Achievement seekers strive for high performance and recognition of their performance. They are motivated to attain goals that are challenging, but also achievable.
- **Affiliation:** People motivated primarily by a need for affiliation look to create positive relationships and opportunities for cooperation with others. It is more important to them that they be liked and not cause social disruption than that they achieve recognition for outstanding achievement.
- **Power:** Power seekers seek primarily to dominate and control others – to gain their obedience in driving towards goals they perceive as being important for all.

Murray and Morgan used McClelland's theory in the development of the Thematic Apperception Test that classifies people in one of the three categories. The test is used among other purposes to aid managers in understanding how best to make use of a staff member's particular profile. For instance – one should offer power seekers the opportunities to control processes, or affiliation seekers the opportunity to build consensus (Murray, 1938).

d) ERG Theory

Clayton Alderfer simplified Maslow's hierarchy of needs by offering his own three-tiered model of motivation defined by needs for existence, relatedness and growth (Alderfer, 1972). Unlike Maslow, Alderfer did not see these needs as being ranked in any order. According to Alderfer, existence needs are for food, water, shelter, security and physical affection. Relatedness needs seek the recognition and approval of a group. Lastly, growth needs are the impulses to move beyond the limitations of one's existing self. According to Alderfer, the frustration of one type of need can lead to increased

emphasis on the fulfilment of another. So for instance lack of social recognition could lead to increased efforts to find physical security or visa versa. He called this the “frustration regression principle (Alderfer, 1972).

The paradigm of human needs remains popular both in the study of human psychology and its application to contexts like the workplace. Today however, effort is directed towards understanding how human biological or neurological processes underpinned by the influence of genes have evolved to direct human behaviour. Best practice is to ensure that any hypothesized human “need” has a sound base in the study of human biology. Given the complexity of the interaction of human biological stimuli in combination with environmental stimuli, there is no longer an effort to create a hierarchy or rigid framework of human needs but rather to study the interaction of genes, environmental conditions neurological and cognitive processes in particular domains of interest like eating disorders, criminality or workplace behaviour.

2.3. Learning and Motivation

In 1913, John Watson wrote a seminal article on behaviourism, launching it as a school of psychological thought (Viney and King, 1993). Watson was a “measurer” and disapproved of the introspective methods of his contemporaries – considering this approach unscientific (Watson, 1924). For Watson, the content of psychology should primarily be human behaviour and not human consciousness. The method of psychological inquiry should be objective and not introspective (Hunt, 1993).

Watson felt that there were no instincts but that human behaviour was the result of a complex interaction of learned habits (Watson, 1928). Many scholars agreed and helped to contribute to the development of behaviourism as a science (Meyer, 1929; Holt, 1931; Weiss, 1924). Other scholars rebelled against the idea that human behaviour could be influenced so dramatically through simple stimulus response mechanisms (McDougall, 1926; Frick, 1928; Lovejoy, 1922). This rebellion stemmed from an objection to the ethics of behaviourism and a claim that it dehumanized human beings. Ivan Pavlov, a celebrated behaviourist, found fame through his experiments in the production of a conditioned stimulus (a bell ringing) leading to a conditioned response (a dog salivating) (Pavlov, 1928). If such responses could be generated using basic principles of conditioning then - it was reasoned - human behaviours were the result of years of conditioning. The following are popular theories of human motivation that fall within the behaviourist camp:

a) Drive Reduction Theory

Early experiments in behaviourism led to the development of “neobehaviourism” a movement aimed at formalizing the principles of behaviourism into a model of human behaviour (Hunt, 1993). Influenced by Darwin, Pavlov and Thorndike, Hull wanted to create a Newtonian science of human behaviour and introduced quantitative methods of research to the science (Viney and King, 1993). Hull’s “Drive Reduction Theory” suggested that people’s basic biological needs (and resulting ‘drives’) increase in strength when left unfulfilled. Once the need is fulfilled, positive feedback reinforces the behaviour that led to that feedback. This results in the formula: Behaviour = Drive x Habits (Hull, 1935). The same drive will thus evoke differing behaviours depending upon the conditioned habits of a given individual. Hull’s work paved the way for one of the most popular behaviourist theories – Skinner’s ‘reinforcement theory’.

b) Reinforcement Theory

B.F. Skinner was an influential behaviourist He believed strongly in observing evidence rather than constructing theories (Franken, 2001). In his two seminal works “Walden 2” (1948) and “Beyond Freedom and Dignity” (1971) he described how human behaviour could be altered through reward and punishment in accordance with the pleasure pain principle. The simplified rules of Skinner’s behaviourism are:

- Consequences that reward, increase behaviour
- Consequences that punish, decrease behaviour
- Consequences that neither reward nor punish, extinguish behaviour

According to Skinner, external stimulus comes before the response and so behaviour is literally caused by external influencers (Skinner, 1948). He described various forms of conditioning including:

- Fixed Interval (Behaviours reinforced at specific time intervals)
- Fixed Ratio (Behaviours reinforced after a fixed number of responses)
- Variable Interval (Behaviours reinforced at random time intervals)
- Variable Ratio (Behaviours reinforced after a random number of responses)

Reinforcement theory later served as the foundation for the establishment of the science of “Organizational Behaviour Modification” (Luthans, Paul & Baker, 1981). Organizational Behaviour Modification (OBM) refers to systematic efforts to improve

organizational effectiveness through the application of behaviorist principles. The fundamental principle of OBM is the application of extrinsic reward and punishment stimuli as motivators for particular behavioral patterns. The majority of research into this approach to modifying behavior in organizations has been conducted in the United States where studies have shown that OBM can successfully influence work performance of individuals and groups. (Adler, 1991).

c) Social Learning Theory

Hull and Skinner influenced Julian Rotter in the formation of 'Social Learning Theory' – the idea that behaviour is influenced by the qualities of observed outcomes of the behaviour by others. These observations lead the individual to have an expectation of whether there is a chance of success arising from a particular behaviour (Rotter, 1954). Social Learning Theory as proposed by Rotter begins to incorporate elements of cognitive psychology and reflects the split from behaviourism of a branch of cognitive theorists. While behaviourists see learning as requiring a change in behaviour, cognitive theorists like Rotter saw the possibility that learning could be internalized without an apparent change in behaviour leading to the addition of a cognitive component to motivation theory.

Albert Bandura expanded on Rotter's theories showing how people learn from one another through imitation and modelling (Bandura, 1977). Bandura described four conditions necessary for effective social learning:

- Attention – the observation must be observed
- Retention – the observation must be remembered
- Motor Reproduction – the observation must be replicated
- Motivation – there must be incentive to model the behaviour (Bandura, 1977)

Theories of learning and behaviourism continue to form an important part of psychological theory and theory of human motivation. The perspective however that human beings are a blank slate entirely influenced by learning processes has been disproven by cognitive theorists and neurologists. Human behaviour has a strong biological component determining a range of behaviours that can be influenced by learning (Cosmides and Tooby, 1992).

2.4. Cognition and Motivation

In the 1930's, behavioural psychologist Edward Tolman concluded that the stimulus response model of hard-line behaviourism was insufficient to explain the full scope of animal and human behaviour. Like Rotter and Bandura, he saw that learning from external stimuli could take place without an immediate accompanying response. The response could emerge later in time (Tolman, 1948). Following extensive experimentation with rats, Tolman developed the concept of “cognitive maps” or “mental models” to describe methods by which the mind structures and processes information that it receives. Just as Kant had posited a rational layer between empirical senses and the formation of knowledge (Kant, 1781), these cognitive maps influence human perception of events.

Formally, cognitive psychology emerged as a distinct discipline during the 1950's (Hull, 1943, Guthrie 1959) culminating in George Miller' founding of a department of cognitive psychology at Harvard university in 1960 (Hunt, 1993). There is no single precise definition of the study of cognitive psychology. According to different texts, cognitive psychology:

- Deals with process of conceptualizing and organizing ideas about the world and the self (Franken, 2001).
- Suggests that the human mind forms mental structures that represent reality (Fodor, 1975).
- Deals with how human beings receive and process information (Reeve, 1982).

The study of human cognition is interdisciplinary and is pursued by biologists, neurologists, psychologists, evolutionary theorists and psychiatrists. Cognitive psychologists use formal scientific method – measuring empirical data – as a method of research rather than introspection. Cognitive psychology has yielded a variety of theories that pertain to human motivation (Gollwitzer and Bargh, 1996). Each theory seeks to describe some aspect of how processes of human cognition influence human behaviour.

a) Cognitive Consistency / Dissonance Theory

In 1956, cognitive psychologist Leon Festinger suggested that human beings seek to maintain emotional equilibrium or “consistency”. In situations where their cognitions conflict with their feelings, people act to restore equilibrium to their feelings by altering their perceptions. In a study, it was found that student's liking of a fraternity increased as the severity of initiation into the fraternity increased. The theory put forward was that,

having behaved in ways inconsistent with their core values, the students had a stronger need to justify the reason for this inconsistency leading to stronger affiliation to the group (Franken, 2001). Another commonly cited example is “the great disappointment” – a belief in the second coming of Christ that remained unfulfilled. Following the disproving of their original ideas, followers of the group changed their interpretation of the text rather than face the dissonance of having their core beliefs disproven (Festinger, 1956). Festinger suggests specific ways in which human beings seek to reduce cognitive dissonance:

- Denial
- Change evaluation of events
- Change expectancy
- Overload with thoughts of past experiences

In 1996, Brehm, Harmon Jones, Greenberg, Simon and Nelson published a study that showed that cognitive dissonance could result from conditions other than those suggested by Festinger – that humans can experience the subjective experiences of cognitive dissonance without the presence of an actual inconsistency. Despite the results of this study, the theory remains a popular theory of human motivation.

b) Attribution Theory

Fritz Heider introduced this social psychological approach to cognitive psychology in 1958. It was later further developed by Harold Kelley, Edward Jones, Lee Ross and Bernard Weiner (Weiner 1980, 1992). Attribution theory suggests that human beings have a need to maintain a positive self-image. People cognitively process events that they experience accordingly. Hence if a person is playing a bad round of golf they might blame poorly kept greens or old clubs rather than a lack of practice or an unhealthy diet. In one study it was found that experienced athletes make fewer self-serving external attributions (Roesch and Amirkham, 1997). Hence they are better able to identify sources of problems and overcome them. According to Heider there are various general ways in which humans process perceptions to maintain positive self-image. They can attribute a success to an internal quality or alternatively attribute failure to some factor outside of control. Another method is to consider that failures result from uncontrollable circumstances – while successes are the result of conditions within control (Heider, 1958).

George Kelley, an American psychologist, built on Heider's Attribution Theory with his "Covariation Model" (Kelley, 1967). According to this model, attributions that influence motivation are formed in relationship to three variables: 'consensus; distinctiveness and consistency'. An individual will attribute a particular stimulus to either an object, a person or a context depending on how strongly each of the three variables presents itself in a given situation. So for example if a person receives positive feedback from one of their managers but not from others, they may attribute this feedback to a quality unique to the manager rather than the work they themselves have done. If the individual receives positive feedback from all of their managers (they have consensus), this feedback singles them out from their team (they have distinctiveness) but the feedback is a once-off event then the person may attribute that feedback to a particular context in which their managers may feel a need to praise them. The table below summarises Kelley's theory of how feedback relates to attributions that are formed.

Kelley's Covariation Model

	Consensus	Consistency	Distinctiveness
Context	Low	Low	High
Object	High	Low	High
Person	Low	High	Low

In the 1980's, Bernard Weiner further developed the concept of Attribution Theory. Weiner's theory distinguishes between internal and external attributions. Internal attributions link the cause of an event with some internal quality of the individual while external attributions relate causes to circumstances outside of the individual. According to Weiner, excessive focus on internal attributions leads to a "self serving bias" (Weiner, 1980). This is a bias in which an individual attributes their successes to personal qualities while attributing their failures to factors outside of their control. Self serving bias can negatively influence performance by denying an individual opportunity to reflect on how their own behaviours may lead to negative outcomes or how their successes may not be the result of their own efforts.

A further expansion of Attribution Theory is termed "Attribution Error" (Jones and Harris, 1967). Attribution Error describes the tendency of human beings to ascribe events to people rather than situations or contexts. So for example, an economic decline

may be attributed to the achievements of the president of a country rather than to a shift in global economic conditions. Alternatively, a failure to deliver on targets may be perceived as a failure relating to a particular manager's ability rather than a decline in demand for a product or other systemic influencers.

c) Reactance Theory

Jack Brehm developed reactance theory in 1966. According to this theory, human beings have an innate desire to maintain perceived freedoms that they possess. When freedoms are inhibited in some way this results in a negative emotional state – and the motivation to re-achieve those freedoms that may have been lost. According to the theory, perception of freedom is subjective. If humans are denied freedom of expression from an early age for instance, they are unlikely to perceive this as a freedom to which they will experience reactance (Brehm, 1966).

d) Disconfirmation Bias

Ross and Lopper found in 1979 that humans are more likely to accept evidence that supports our beliefs and ignore evidence that disconfirms our beliefs. Their experiment involved having pro death penalty and anti death penalty students evaluate fabricated studies on capital punishment some of which supported the death penalty and others which did not. It was found that students marked papers that supported their views with better grades than those that disconfirmed their views.

e) Goal Setting Theories

According to goal setting theory, human beings are motivated by the desire to achieve a specific outcome or goal (Locke, 1996). Motivation to achieve goals is influenced by the proximity of the goal (is the goal a week away or 5 years away), difficulty (how easy or hard is it to attain the goal) and specificity (how clearly defined is the goal). A goal that inspires a low degree of motivation would be one that is distant in the future, that is extremely difficult to attain (or extremely easy) and that is vague in its composition. One of the outcomes of Locke and Latham's research is the idea that "chunking" a major goal into a series of smaller goals will improve motivation in pursuit of the overall goal (Locke and Latham, 2002).

Goal Setting Theory was popularized in the business world in the 20th Century by management writer Peter Drucker who coined the term "management by objectives" to

describe the process of setting shared objectives or goals that would allow members of an organization to align their efforts in pursuit of fixed targets (Drucker, 1954). An advantage of goal setting theory applied to an organizational context through management by objectives is that it can help to focus individual's efforts and their motivation on particular tasks, timelines and desired outcomes in a way that leverages fundamental qualities of human hard-wired psychology. A potential disadvantage is that excessive focus on the achievement of fixed goals defined at a certain point of time can lead to an overly linear approach to motivation that can disregard significant systemic factors that may influence business environments over time.

f) Cumulative Prospect Theory

Tversky and Khaneman introduced this theory in 1992 as an analysis of human behaviour in situations of economic risk. They observed that:

- Humans tend to value potential outcomes subjectively and in reference to a starting point rather than in terms of the outcome itself.
- Humans tend to value potential gains more highly than potential losses.
- Humans overvalue extreme, unlikely events and undervalue less extreme average events.

(Tversky and Khaneman, 1992)

g) Hyperbolic Discounting

Ainslie's theory of Hyperbolic Discounting shows how human beings value short-term consequences more than long-term consequences. The long-term effect of smoking may be death – but the short-term consequence is a pleasant lift. An evolutionary explanation put forward for this behaviour is that given the uncertainty of the environment during human evolution, it was more pragmatic to take advantage of a resource that could be had in the short term than risk losing any reward by failing to survive long enough to claim it (Ainslie, 1992).

h) Temporal Motivation Theory

Developed by Steel and Koenig in 2006, this theory states that people are most likely to strive for goals that are desirable and that are easy to attain. They are least likely to avoid striving towards goals that are more difficult to attain and that have pay offs that are more distant in the future. The theory can be written in the formula: $Motivation = EV / LD$ where:

E = Expectancy that a task can be completed

V = Value of its completion

L = the immediacy of reward (lag)

D = the individual's particular sensitivity to delay

i) Expectancy Value Theory

Tolman was the earliest theorist to posit the existence of “expectancies”. He saw three principles to human motivation:

- Behaviour is directed towards or away from a specific goal.
- Behaviours leading towards a goal will form a consistent pattern.
- The shortest and easiest path to a goal will be taken. (Petri, 2003)

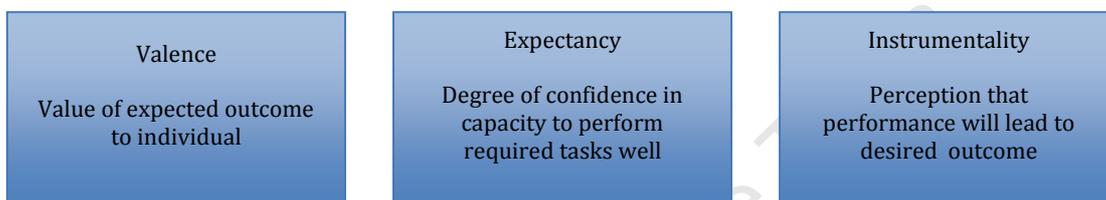
The “consistent pattern” that is formed becomes the “cognitive map” that influences perceptions of events and consequent responses to them. Expanding on this idea, he suggested that human beings develop “expectancies” – expectations of what behaviours will lead to what outcomes. (Tolman, 1949)

In 1954, Julian Rotter described a ‘social learning theory’ of how people’s expectations of the outcomes of behaviour influence their motivation to perform that behaviour. Drawing from Heider’s Attribution Theory, he developed the concept of “Locus of Control” (1966) that seeks to classify people along a continuum from externals (influenced by outside events) to internals (motivated by inner forces). Rotter believed that humans form expectations of their capacity to achieve a goal based on past experiences and outcomes of similar actions that they have observed. Expectancy Value theory was developed by Martin Fishbein in the early 1970’s. According to the theory, if

a person has a strong intention to perform an action then they are likely to do so. Their intention to perform the action will be influenced by their beliefs about the consequences of that action and the degree to which they value perceived positive outcomes. Ajzen later added another variable to the equation – the person’s perception of their own competence in achieving a certain outcome. This is the “theory of planned behaviour” (Ajzen, 1985).

Victor Vroom’s Expectancy Theory

$$\text{Motivation} = \text{Valence} \times \text{Expectancy} \times \text{Instrumentality}$$



Cognitive psychology builds on the idea that human beings have innate mental qualities that influence the manner in which we process information and respond to environmental stimuli. While cognitive psychologists study human thought from a functional perspective – investigating the manner in which processes of cognition influence perceptions and behaviours, neurologists study how the physiological properties of the brain relate to those cognitive processes. Recent advances in brain scanning or “neuroimaging” techniques including functional magnetic resonance imaging (fMRI) computed topography (CT) and positron emission topography (PET) are introducing new methods by which neurologists can seek to connect human neurological functioning with human cognition and behaviours. At the same time, evolutionary psychologists seek to provide an explanation for how or why certain neurological features may have come about through evolutionary processes.

2.5. Evolutionary Psychology, Cognitive Neuroscience and Motivation

The field of evolutionary psychology is founded on the idea that the human mind is a product of the brain rather than an intangible quality abstracted from physiology. That the brain and human psychology developed as a result of a series of adaptations to environmental conditions that allowed successive genetic inheritors to more effectively meet the demands of survival and procreation (Pinker, 1997). While 20th century science divided the studies of medicine and psychology - the biological and the sociological - the

trend in the 21st century is towards a reunification of body and mind. This proposed reunification has profound implications with evolutionary psychologist David Buss suggesting that it stands to revolutionize the field of psychology (Buss, 1995). Some proponents of an evolutionary perspective of human psychology believe that this approach has the potential to decisively explain the origins of human behaviour and unify the variety of mechanisms psychologists have developed to explain it (Cosmides 1989; Tooby 1992; Buss 2000; Pinker 2002).

Evolutionary psychologists Bernard, Mills, Swenson and Walsh put forward an evolutionary model of human motivation based on the idea that the majority of human motivators stem from the need to solve various social problems associated with finding a mate and ensuring survival (Bernard et al, 2005). A summary of this model is described in table four. According to this model, human beings evolved hard-wired behavioural patterns as an adaptation to environmental challenges much as we evolved physiological structures to do the same. Because human beings are social animals and depend heavily on social interaction to enable survival and procreation, many of these factors extend beyond the basic drives to protect oneself and to mate and focus on ensuring that as individuals, we are well thought of by our peer group.

Table 4. Summary of Evolutionary Motivators defined by Bernard et al, 2005

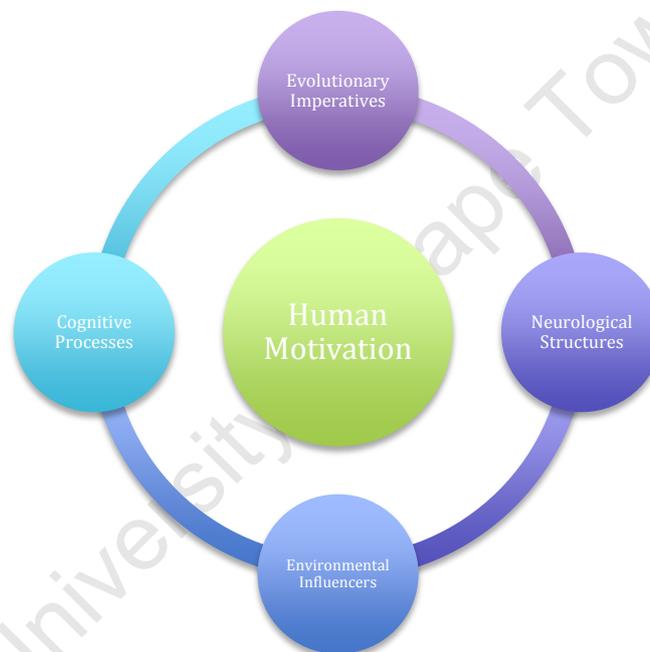
Motivational Variable	Evolutionary Goal
Self Protection	Protecting self, kin and coalition members
Curiosity	Understanding environment so as to better protect self and kin
Safety	Securing personal territory against hostile forces
Play	Understanding the social environment and its rules
Health	Protecting physical integrity
Mating	Genetic propagation
Appearance	Increasing social status and desirability as a mate
Material	Increasing social status and desirability as a mate
Mental	Increasing social status and desirability as a mate
Physical	Increasing social status and desirability as a mate
Relationship Maintenance	Forming and maintaining cooperative alliances
Coalition Formation	Forming and maintaining cooperative alliances
Conscience	Forming and maintaining cooperative alliances
Memetic Legacy	Forming and maintaining broader alliances to produce a positive social environment
Meaning	Explaining one's existence and non-existence.

A major limitation of evolutionary psychology is the difficulty of empirically falsifying its claims. Since evolutionary processes take place over long periods of time, it is difficult to study these processes themselves. As an alternative, neurologists seek to deconstruct the functioning of the human brain in its presently evolved form in an effort to better understand how neurological structures work (Kolb, 1995). Brain mapping techniques like functional magnetic resonance imaging (fMRI) allow researchers to associate parts of the

brain with behaviours or emotional states (Cabeza and Kingstone, 2001). This practice has given birth to the field of cognitive neuroscience that seeks to understand the relationship between cognitive processes and neurological structures.

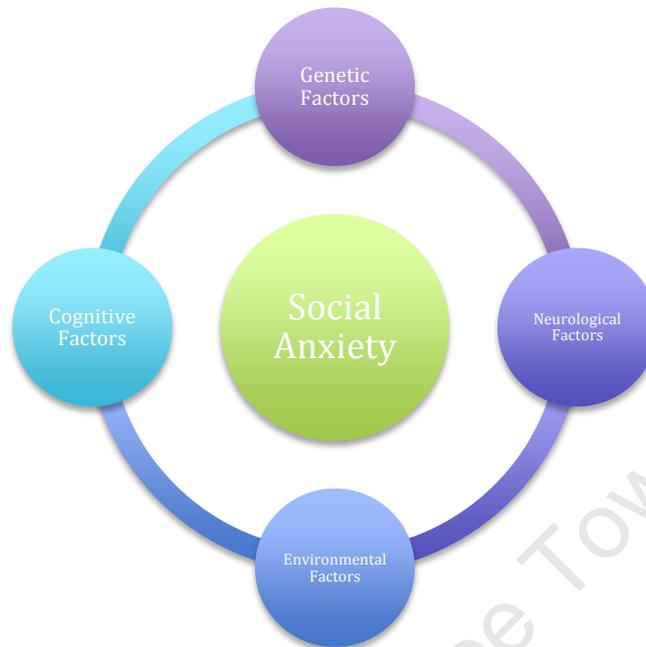
The dominant trend in the 21st Century study of human psychology then is to seek an understanding of human motivation through evidence collected from four sources: evolutionary adaptation (as expressed through human genes), the physiological structures of the brain (human neurology), environmental influencers and the functional qualities of human thought processes or cognitions (Sapolsky, 2001).

Figure 3. A 21st Century conception of human motivation



In describing qualities of human psychology the focus is no longer on the question of whether “nature” (biology) or “nurture” (environment) *cause* behaviours but rather on how nature and nurture *interact* to produce behaviours. As an example, a psychologist researching the phenomenon of social anxiety (a condition in which an individual experiences an abnormal degree of anxiety when engaging in processes of social interaction) seeks to understand how an individual’s biology, including their genes, neurology and nervous system, interacts with environmental circumstances like childhood trauma to result in the condition, how their thought patterns (cognitions) influence the condition and why such a condition may have come about as an evolutionary adaptation

Figure 4. A 21st Century conception of social anxiety



A non-linear systems approach to modelling human motivation in the workplace based on this four-part conception of motivation is described in Chapter five. First however, we review a history of the application of motivation theory in the domain of work.

2.6. Summary and Analysis of Motivation in the Psychological Sciences

Darwinian theories of evolution prompted early psychological researchers to seek connections between human biology and human psychology. Theories of instinct and arousal were vague and unsubstantiated given the limited understanding of human neurology of the time. The trend became to study human behaviour from a functional rather than biological perspective, giving rise to psychological schools of need, humanism, behaviourism and cognition. Need and humanist theories were efforts to classify human behaviour into categories based on observations of behavioural patterns. Need theory remains popular but has been augmented by the search for biological and evolutionary underpinnings of theorised “needs”.

Behaviourists challenged need theorists by showing that human behaviour could be conditioned by environmental stimuli over time. It was thought that this process of

'conditioning' could be reduced to mathematical principles since it depended on a stimulus and a corresponding response. Simple models of pleasure and pain conditioning came into question however when cognitive psychologists produced evidence that an individual's cognitive interpretation of a stimulus would substantially influence a response to it (Tolman, 1948). The method used by human beings to cognitively process events in the moment, and through memory, was seen as influencing their behaviour (Hunt, 1993).

Cognitive theories of motivation represent an effort to connect human behaviour to functional mental processes. While neurologists attempt to achieve this on a biological level (studying mental "hardware"), cognitive psychologists seek to achieve it by studying the expressions of people's behaviours through their judgments, perceptions and choices. (mental "software").

Evolutionary theories of motivation aim to understand human behaviour in terms of how various neurological structures and associated behaviours may have developed as an evolved adaptation to enable survival and procreation. According to this model, the human mind is not a blank slate but comes pre-programmed with behavioural tendencies that influence human motivation. Current best practice is to understand human psychology as the interaction of evolutionary imperatives; neurological structures; processes of cognition and the influence of environmental factors or processes of learning. This practice requires the reconceptualising of human motivation as a complex system rather than a linear structure.

Table 5: Trends in the Study of Motivation - 14th - 21st Centuries

A summary of how the study of human motivation has evolved since the Enlightenment.

Historical Period	Trend in the Study of Human Motivation	Influencing Factors	Psychological Theories or Schools
1400's onwards	Humans have innate motivators as individuals that can be studied independently of political or social institutions like church and state.	The Renaissance and Enlightenment Erosion of state and church power Advent of Humanism	Not yet founded
1800's onwards	Human biology is an important dimension of motivation. Humans are motivated by internal instincts or drives in the same way animals are.	Popularity of Darwinian theory of evolution	Structuralism Functionalism Neuropsychology Instinct Theory Arousal Theory
1930's onwards	Humans have innate needs. Humans behave according to a stimulus response model. Behaviours are conditioned through repetition of positive or negative stimuli.	Materialism Measurement	Need Theory Behavioural Theory
1940's onwards	Cognition influences behaviour Human cognition processes perception.	Relativism Digital Computing Computational theory of mind	Cognitive Psychology
21st Century	Human neurological systems evolved as evolutionary adaptations. Behaviour is an emergent property of a neural net that processes a complex interaction of biological and environmental factors.	Brain Scanning Genetics Connectionism	Evolutionary Psychology Neurology Cognitive Neuroscience

University of Cape Town

Chapter 3

Theory of Work Motivation

Chapter 3

Theory of Work Motivation

3.1. Theory of Work Motivation from Classical times to the Enlightenment

A discussion of the nature of the relationship between people and work enters literature in the Classical Greek period. Work was considered an undesirable occupation since it pertained to the needs of the body - needs that were considered lower class or base (Long, 1999). Plato comments that those who are worthless live to eat and drink (fulfil the needs of the body) while those of worth only eat and drink in order that they might live (and so pursue higher ideals) (Plato cited in Jowett, 1932). Aristotle observed that paid jobs degrade the human experience (Aristotle, 360 BC). The highest ideal of humankind was thought to be the pursuit of philosophy and there was concern that work among the higher classes would erode the division between master and slave (Braided, 1975). For those forced to perform work, the relationship to that work was however considered important. Aristotle suggested that taking pleasure in work would result in a greater perfection of that work (Aristotle, 360 BC) - a sentiment echoed by Plato who suggested that a person working in alignment with his or her natural gifts and without outside interference would produce a higher quality of work than they who were forced to do work against their natures (Plato cited in Jowett, 1932).

The Middle Ages saw the continuation of a view that work held little intrinsic value (Tilgher, 1930). Motivation to work stemmed from the necessity of providing for physical needs or the demands of social and political systems. The growing influence of religion in social affairs however introduced a new dynamic into the relationship between the worker and their work – the idea that work was “ordered by God” (Hill, 1992). The Judeo-Christian tradition suggests that human being’s original work was as caretakers of the Garden of Eden (Genesis 2:15). Having been barred from the garden through sin, the human role was to work in suffering and so redeem that sin. "By the sweat of your brow you will eat your food until you return to the ground, since from it you were taken; for dust you are and to dust you will return" (Genesis 3:19).

In the early 15th century, the religious scholar and philosopher John Calvin broke with tradition and suggested that all men should work - whether rich or poor, upper or lower class - that not to work was a sin in itself (Parker, 1995). This was the founding of Calvinism and a work ethic that came play a significant role in people's conception of their relationship to work. Max Weber, a sociologist, termed the new philosophy the "Protestant Work Ethic". The Protestant work ethic was characterized by values of diligence, timeliness and delayed gratification (Rose, 1985). While the Enlightenment saw a decline in the power of the church in people's lives, the Protestant work ethic remained entrenched in the culture of work in the Western world. Philosophers of the Enlightenment continued to support Calvin's philosophy of work as a pursuit of all peoples in a society rather than just a certain class (Kocka, 2006) and the activity of work was seen as being worthy of respect.

The freedom of thought that characterized the Enlightenment paved the way for the industrial revolution that was to change human's relationship to their work in profound ways. This revolution saw an increase in mechanization, a corresponding decrease in manual labour and an increase in the practice of division of labour (Gilbert, 1977). These factors began to remove individual control over work. A model of management evolved that was authoritarian and that conceived of an average worker as one who was "basically lazy and was motivated almost entirely by money" (Daft and Steer, 1986: 93).

3.2. Theory of Work Motivation in the 20th Century

Theories of Work Motivation presented in this section are described chronologically – in the order in which they were established. It should be noted that this is only one approach to categorizing theories of work motivation in the 20th and 21st centuries. It is also possible to distinguish between "content" and "process" theories of motivation. 'Content' theories consider motivation from the perspective of the satisfaction of intrinsic needs while 'Process' theories view motivation from the perspective of cognitive processes. This distinction arose during a time when cognitive processes were becoming recognized by motivation theorists as separate influencers to motivation from intrinsic needs that had dominated the field in the past. The following table lists the theories of human and work motivation described in this review and classifies them according to the "content / process" dichotomy.

Theory	Proponent	Year	Category
Instinct Theory	William James	1890	Content
Arousal Theory	Yerkes and Dodson	1908	Content
Scientific Management	Frederick Taylor	1909	Process
The Human Relations Model	Elton Mayo	1933	Content / Process
Drive Reduction Theory	Hull	1935	Process
Murray's Psychogenic Needs	Henry Murray	1938	Content
Maslow's Hierarchy of Needs	Abraham Maslow	1943	Content
Reinforcement Theory	B.F. Skinner	1948	Process
Acquired Needs Theory	Dave McClelland	1953	Content / Process
Social Learning Theory	Julian Rotter	1954	Process
Cognitive Consistency Theory	Leon Festinger	1956	Process
Attribution Theory	Fritz Heider	1958	Process
X/Y Theory	Douglas McGregor	1960	Content / Process
Equity Theory	Adams	1963	Content / Process
Freudian Theory	Sigmund Freud	1964	Process
Reactance Theory	Jack Brehm	1966	Process
Two Factor Theory	Frederick Herzberg	1968	Content / Process
ERG Theory	Clayton Alderfer	1972	Content
Immaturity / Maturity Model	Chris Argyris	1974	Content / Process
Job Characteristics Model	Hackman and Oldman	1975	Content / Process
Disconfirmation Bias	Ross and Lopper	1979	Process
Cumulative Prospect Theory	Tversky and Kahneman	1992	Process
Hyperbolic Discounting	Ainslie	1992	Process
Expectancy Value Theory	Victor Vroom	1995	Process
Goal Setting Theory	Locke and Latham	1996	Process
Temporal Motivation Theory	Steel and Koenig	2006	Process
Evolutionary Psychology	Various	N/A	Content / Process
Cognitive Neuroscience	Various	N/A	Content / Process

Later in this chapter, the view is put forward that human motivation is an interaction among cognitive processes, evolved needs, environmental influencers and neurological structures. That the complexity of this interaction is better visualized as a non-linear dynamic system than a linear structure that would be described well by a dichotomy between content and process. For this reason, theories are presented in chronological order rather than other categorizations.

a) Scientific Management

In 1909, Frederick Taylor introduced a model of work motivation that met with the industrial revolution era business requirement for workers willing to adapt their work related behaviours and expectations. Taylor adhered to the Protestant work ethic, believing that human beings are rational and make rational work-related choices based on a motivation to achieve maximum income (Taylor, 1909). According to Taylor, as rational beings, people place corporate interests above private interest and are motivated to maximize company profits. The role of the worker in this model is to adapt their output to achieve the most efficient work style. Taylor believed that scientific procedure rather than managers should determine work patterns and undertook to scientifically measure effective work processes and replicate those processes across organizations. Maximization of productivity for the business was the priority of scientific management and the human being became objectified as a tool of production (Covey, 1989). The internal world of the employee was largely ignored.

b) The Human Relations Model

Taylor's views of scientific management were challenged by an approach to work motivation that placed the human being as central to the work equation rather than as simply a variable of it. In 1933, Elton Mayo founded a school of work motivation termed "Humanism". Humanism puts forward the idea that economic interests alone do not motivate people. Rather that people have complex motives involving individual feelings and preferences (Mayo, 1933).

The principles of humanism were based on the Hawthorne studies conducted over 20 years at a Western Electrical plant. Mayo found that workers at the plant improved their output by 112% simply as a result of being studied (Mayo, 1933). He believed that people worked harder because they wanted to be seen in a good light by researchers and managers. From these studies, Mayo concluded that informal systems of relationships have a greater

influence on work motivation than monetary rewards. As a result, he developed a model of organizational motivation based on the following principles:

- Satisfied employees are more productive.
- Open communication enhances productivity
- Individual needs and feelings of employees are important.
- Managers must build good relationships with employees - acting as friends rather than managers.
- Employees should be involved in major decisions that influence their organization.

The idea that people's relationship to their work extends beyond rational action towards the good of the organization was soon widely adopted by researchers studying the topic of work motivation. These researchers sought to somehow describe and so be able to influence the intangible factors that Mayo's study highlighted.

c) Equity Theory

Adams's theory of equity suggests that people seek to achieve equilibrium between their contribution to work and their reward for that work (Adams, 1963). Over-contribution with under-reward stimulates feelings of resentment. Under-contribution with over-reward stimulates feelings of guilt. Hence equilibrium must be achieved to ensure optimal motivation. According to the theory, different people will attribute different values to their contributions or rewards. Equity theory is described by the following formula:

$$\frac{\text{Individual's Outcome}}{\text{Individual's Own Inputs}} = \frac{\text{Relational Partner's Outcome}}{\text{Relational Partner's Own Inputs}}$$

(Adams, 1963)

Adams suggests that the key factor to ensure motivation is that there should be a perception of a fair balance between inputs and outputs in a given work context. This perception, according to Adams, is influenced most strongly by a self-comparison to the input / output ratios perceived among other people in a work environment. In other words an employee will assess how fairly they are being rewarded for their contribution in the workplace by assessing how much work vs. reward others are achieving in that workplace. Improving motivation then is not simply a matter of improving an individual's perception

of equity but of ensuring an even distribution of equity among all workers within a given system.

In more recent years, equity theory has been expanded upon in a discussion of social and organizational concepts of “procedural justice” and “distributive justice”.

Procedural Justice is discussed by the philosopher John Rawls (Rawls, 1971). The concept suggests that an important facet of societal or organizational health is that burden of work and benefits of reward should be distributed in a transparent and coherent process. Failure to adhere to such a process will lead to discontent. Distributive Justice, also discussed by Rawls has been applied to the workplace by organizational theorists. (Cohen-Charash & Spector, 2001). This theory suggests that the manner in which decision-making processes are managed within an organization will impact how engaged employees are the outcomes of those processes. Decision-making processes that are perceived as equitable and transparent will improve engagement.

Notions of procedural and distributive justice have gained traction through the advent of the social neurosciences that suggest that human cognition is wired in such a way as to have strong mechanisms for perceiving and evaluating the equity of a situation or relationship (Lieberman, 2001).

d) McGregor’s X/Y Theory

Also in the 1960's Douglas McGregor - a social scientist - put forward a theory of workplace motivation based on the difference between authoritarian and participative managers (McGregor, 1960). McGregor was influenced by the work of humanist psychologist Maslow and, like Mayo, believed that human beings have needs that can be met (or not met) through work. He defines two common workplace perceptions of human beings that influence how managers attempt to motivate them.

According to McGregor, theory X style management is based on the perception of human beings as inherently avoiding of work, lacking in ambition and motivated by fear of punishment. This type of person therefore needs to be directed clearly by management who must adopt an authoritarian management style. Y style management is based on a conception of human beings as work seeking. Such people are capable of self-management and will take responsibility for achieving work related goals. According to this theory, most human beings have creative capacity and enjoy exercising that capacity. Management style

must therefore be a participative process and the role of the manager is to facilitate the expression of the individual's innate capacity for work.

X/Y Theory was a response to a perceived need for participative management styles and greater independence of the employee as opposed to rigid control. The principles of this theory continue to be practiced in workplaces today.

e) Immaturity Maturity Model

Chris Argyris built his model on McGregor's findings, suggesting that while human beings evolve in their maturity over time, organizations tend to treat people as immature beings, inhibiting their growth and potential contribution (Argyris 1974). On one end of a continuum he describes immaturity - represented by passive, dependent, short-term thinking. On the other end is maturity - characterized by self-awareness, independence, long-term thinking and self-direction. According to Argyris, most organizations operate in a manner that encourages immaturity among employees. Organizations that encourage maturity among employees are seen as creating self aware, proactive staff.

f) Herzberg's Two-Factor Theory

In the late 1960s, Fredrick Hertzberg conducted interviews with more than two hundred American accountants and engineers. They were asked to note times when they felt particularly happy or unhappy with their work conditions. The main outcome of this study was the finding that factors influencing satisfaction with work are different from those influencing dissatisfaction with work (Hertzberg, 1968). According to the theory, 'motivators' are one factor of motivation. They account for factors that encourage positive motivation and include:

- Status
- Advancement opportunity
- Recognition
- Responsibility
- Stimulating work
- Sense of personal Achievement
- Growth

'Hygiene factors' are those factors, that, when absent, encourage negative motivation and include:

- Financial remuneration
- Quality of supervision
- Working conditions
- Job security
- Interpersonal relations

According to Herzberg, some employees are more driven by the presence of motivating factors. Others are more driven by the absence of hygiene factors.

g) Expectancy Value Theory

Victor Vroom developed his theory of work motivation based on the work of Tolman and Fishbein in the field of cognitive psychology. The theory is summarized in the formula: $\text{Motivation} = \text{Valence} \times \text{Expectancy (Instrumentality)}$ (Vroom, 1995). Valence measures the degree to which an individual values a particular outcome. Expectancy measures the degree of confidence an individual holds in their capabilities. Instrumentality measures the extent to which an employee anticipates that a given goal is achievable. Hence in order to achieve a high level of motivation, a person must highly value an outcome, be confident that they possess the skill needed to attain that outcome and confident that the outcome is in fact achievable.

h) Job Characteristics Model

In 1975, Hackman and Oldman put forward their 'Job Characteristics Model'. The model defines five characteristics of jobs – 'skill variety', 'autonomy', 'feedback', 'task significance' and 'task identity'. These characteristics influence three psychological states – 'meaningfulness', 'responsibility' and 'knowledge of results'. These characteristics and resulting states lead to work outcomes including motivation and job satisfaction. The combination of these factors results in a "motivation potential score" that shows how strongly a given job will influence an individual's motivation to perform a task.

3.3. Theory of Work Motivation in the 21st Century

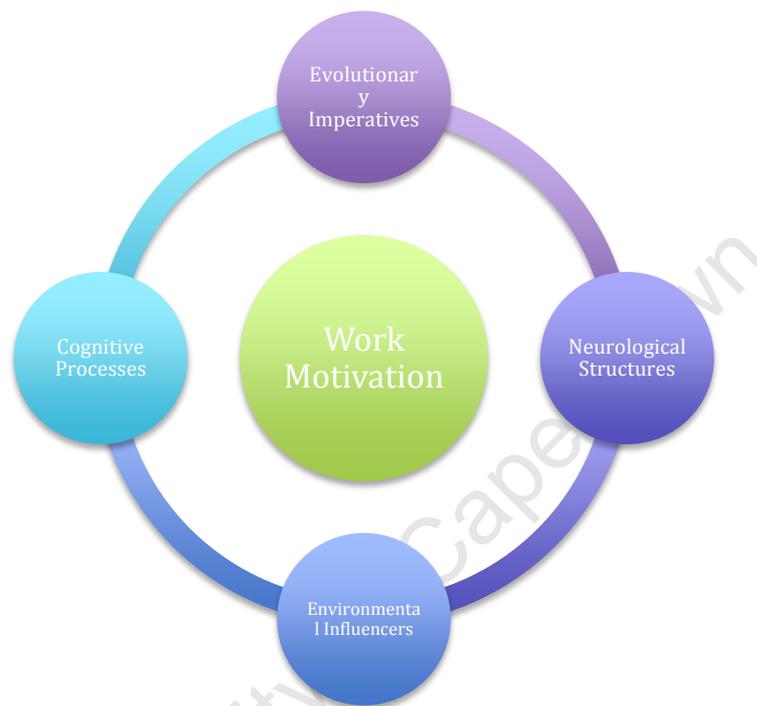
The 21st Century perspective of human behaviour and motivation focuses on studies of human neurology, cognition and evolution (Sapolsky, 2002). It has become accepted that many aspects of human behaviour are "hard wired". These findings put a final nail in the coffin of Taylorian or Skinnerian approaches to work motivation - the ideas that human beings are motivated solely by rational choices made in the best interest of the business (Taylor, 1909) or that human beings are capable of adopting any behavioural pattern on the basis of processes of conditioning alone (Skinner, 1948).

It is within this context that a discussion of the difference between "intrinsic" and "extrinsic" motivators has become popular in 21st century theory of work motivation (Deci, 2000). "Extrinsic" motivators refer to those factors, outside of an individual, that influence motivation such as a salary or a performance bonus. "Intrinsic" motivators refer to factors innate to human beings that self-generate motivational energy without external interference. The extrinsic perspective of motivation can be related to the behaviourist perspective of human psychology that suggested that human behaviour is the product of externally applied rewards and punishments. The intrinsic perspective of motivation can be related to the increasingly prominent view that much of human behaviour stems from innate and biological qualities of human psychology – as put forward in theories of evolutionary psychology and the cognitive neurosciences.

The re-unification of the biological and the social sciences has given birth to a new set of disciplines within the business sciences termed "neuro-business" (Saad, 2011). Neuro-business is the application of theory from the cognitive and social neurosciences to business processes giving rise to sub-disciplines of 'neuro-economics', 'neuro-marketing', 'neuro-leadership' and 'neuro-coaching'. Researchers in these areas seek to understand how the functioning of the human brain influences the study of business processes. The science of neuro-business is in its infancy and researchers are only at the very beginning of a process of interrogating how human evolution gave rise to neurological systems that influence human behaviour in the workplace. The finding that there is a strong link between neurological systems and human social behaviour however seems set to transform our understanding of factors that influence behaviour in the workplace (Saad, 2011).

Drawing from Figure 1 in Chapter 1, we see that study of human psychology in the 21st Century focuses on the interactions of four domains: evolutionary imperatives; neurological structures; cognitive processes and environmental influencers.

Figure 5. A 21st Century conception of work motivation



The challenge for organizational theorists moving forward then is to understand how these four factors interact in the context of the workplace to yield motivational energy.

3.4. Summary and Analysis of Theory of Work Motivation

The formal study of work motivation originated during the industrial revolution as division of labour prompted the re-engineering of human work processes that had evolved over prior centuries. Scientific management as a motivational approach reflected the spirit of the age in seeing human beings as rational actors who would adapt their behaviour to suit the most efficient work processes required by organizations. These organizations, largely involved in processes of industrial manufacture, required human beings who could perform repetitive tasks on command. Scientific Management focused on methods of distributing work “best practices” among employees through methods of reward and punishment as well as an appeal to the ‘rationality’ of serving the best interests of the corporation.

The humanist movement represented a break from this paradigm in its perspective that human beings have complex motivators that stem from sources outside of rational choice. Researchers studying work motivation through the 20th Century sought to arrive at a deeper understanding of these motivators, drawing on behavioural, cognitive, psychotherapeutic and developmental models of psychology. New models were introduced that suggested ways in which the “non-rational” dimensions of human behaviour and motivation could be leveraged in service of the organization.

At the start of the 21st Century, researchers continue to seek understanding of how intrinsic qualities of human psychology influence work motivation. Opportunity exists to draw on research in the areas of cognitive neuroscience and evolutionary psychology that are providing valuable new evidence about the workings of human behaviour. A major challenge in applying emerging theory to the formulation or application of work motivation theory however is the recognition that human behaviour and motivation emerge from a complex and interaction of variables – making the qualities of motivation difficult to predict or influence.

Table 6: Trends in Theories of Work Motivation from the Classical Period to the Information Age

A summary of how our understanding of work motivation has evolved since Classical times including particular theories of work motivation associated with different periods.

Historical Period	Trend in Thought on Work Motivation	Influencing Factors	Psychological Theories or Schools
Classical Period	Labour in the physical world is not a desirable pursuit. The highest pursuit is philosophy in the abstract or non-material world.	The affluence and intellectual freedom of Athenian society	Socratic Philosophy Platonic Philosophy Aristotelian Philosophy
Reformation	Work is an intrinsic good and a “service to God”	The prominence of religion in state and educational systems	Protestantism Calvinism
Industrial Revolution	The worker should adapt their work behaviours to meet the firm's needs in the most efficient manner possible. Workers can be conditioned into appropriate behaviours through feedback of punishment and reward.	Industrialisation Division of labour Mechanization of work processes The corporation as an entity with the rights of an individual	Scientific Management Behaviourist Psychology Extrinsic Motivation
Information Age	The mind is not a blank slate. Motivation is an emergent quality of the complex interaction of evolutionary; neurological; cognitive and environmental factors. Human beings have "intrinsic" motivators that influence both motivation and work performance.	Humanism Secularism Worker rights	Equity Theory Expectancy Theory Evolutionary Psychology Neurology Cognitive Psychology Intrinsic Motivation

Chapter 4

A Non-Linear Conceptual Model of Work

Motivation

University of Cape Town

Chapter 4

A Non-Linear Conceptual Model of Work Motivation

Chapter 2 described how 21st Century psychologists view human motivation as a property influenced by variables emerging from four domains: evolutionary imperatives; neurological structures; cognitive processes and environmental influences. Chapter 4 builds on these findings by introducing the idea of work motivation as a complex system. To begin with, the ontology and epistemology of the idea are discussed. Next, theories of complex systems relevant to an understanding of motivation are described. Methods of modelling complex non-linear data are then discussed focusing on artificial neural networks. The chapter concludes with the description of a method of using artificial neural networks to model complex work motivational systems.

4.1. Ontology and Epistemology of a Non-Linear Conceptual Model of Work Motivation

A majority of the theories of human motivation established during the 19th and 20th Centuries were founded on three scientific principles discussed in Chapter 1: reductionism, linearity and Newtonian causality.

- a) Reductionism: A reductionist approach seeks to break down human motivation into components. The psychologist Hull for example reduced human behaviour to a fixed set of drives (Hull 1935). The thought was that if psychologists became sufficiently refined in their ability to analyse and categorise components of human motivation, a resulting model would reflect the workings of that system. The blueprint for human motivation would be similar to the blueprint of a watch - perfectly representing the mechanisms that controlled it's functioning.

- b) Newtonian causality. A causal approach to modelling human motivation seeks to define motivation on the basis of “inputs and “outputs”. In motivational terms, this is the belief that by understanding the inputs of motivation and the precise nature of their relationships to each other, the output of behaviour might be predicted and controlled. Referring to Hull again, one can see the principle of Newtonian causality reflected in his formula: Behaviour = Drive x Habits (Hull, 1935). In this equation the inputs are the cumulative strengths of various drives multiplied by the cumulative strengths of habits and the output is behaviour.
- c) Linearity: A linear perspective of motivation suggests that an input to a behavioural system will result in an output with little distortion of the strength or quality of that input as it passes through that system. For example, input of praise from a peer group to a behavioural system would result in a corresponding output of motivation that would be based on the strength of the input praise. The reward of ten people applauding a performance may yield a factor of, say, “10” motivation while the reward of 100 people applauding would result in 100 times the effect for a factor of “1000” motivation.

As an illustration of these principles, the examples below are theories of motivation drawn from different schools of psychological thought of the 19th and 20th Centuries. All are reductionist in their formulation in that they attempt to break motivation down into sub-components. All display qualities of Newtonian causality in their assertions that a framework of these components “causes” human behaviour. All are linear in that they arrange these components in a linear equation:

Behaviour = Drive x Habits (Hull, 1935)

Behaviour = (consequences that reward) – (consequences that punish) – (consequences that neither reward nor punish). (Skinner, 1948)

Behaviour = Expectancy (perceived probability that effort will lead to performance) x Instrumentality (perceived probability that performance will lead to outcome) x Valence (value of expected outcomes to an individual) (Vroom, 1995)

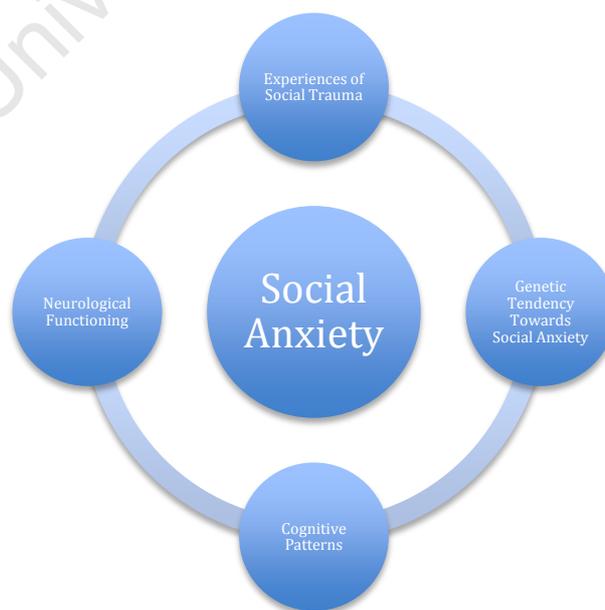
In contrast to such models and as discussed in Chapters 2 and 3, researchers are increasingly regarding motivation as the result of a complex interaction of neurological, environmental, genetic and cognitive factors. Modelling this interaction using a linear model is inadequate because motivational variables do not inform behaviour in static, linear ways. A behaviourist psychologist might view social anxiety (a condition characterized by high degrees of anxiety in social situations) as a conditioned product of negative feedback received in the past from their environment. Addressing this condition would be a matter of providing positive social reinforcement resulting in a new behavioural pattern.

Figure 6. A Behaviourist Model of Social Anxiety



Today however it is understood that social anxiety, in addition to being influenced by environmental factors, has genetic and neurological influencers. Also, that one of the most effective ways of dealing with the condition is to work on re-patterning cognitive processes (Rosenstein, 2011). A behaviourist approach based on positive reinforcement will *influence* the system but may not have the most useful impact on the system as a whole.

Figure 7. A Complex Systems Model of Social Anxiety



Accordingly, this thesis adopts the view that human motivation in the workplace is influenced by a range of variables that interact with one another to result in the phenomenon of motivation. This thesis proposes that the interaction of motivational variables is best modelled as a *complex, non-linear system* rather than a linear equation. Before elaborating on this view it is useful to define certain qualities of complex non-linear systems.

4.2. Theory of Complex Systems

4.2.1 Non-Linearity and Dynamism in Complex Systems

First established in the 1940's, the study of complex systems arose out of the work of scientists in fields including: philosophy (Hegel, 1807); mathematics (Poincare, 1999; Gödel, 1931; Mandelbrot, 1983; von Neumann 1932) sociology (Meade, 1964), physics (Prigogine, 1977; Bohr 1958; Heisenberg, 1924; Bohm, 1957), biology (Varela and Maturana, 1984; Bertalanffy, 1968), engineering (Ashby, 1956; Beer, 1959; Forrester, 1968), and management theory (Checkland, 1981; Senge, 1990; Wheatley, 1999).

A complex system is a set of interacting variables that exhibits qualities of “*non-linearity*” and “*dynamism*” (Bohm, 1980).

- A *non-linear system* is a system in which the output of the system is not directly proportional to the input of the system.
- A *dynamic system* is a system in which the relationships between components of the system change over time.

The global economic system for example displays qualities of non-linearity and dynamism. The system is *non-linear* in that a change in one part of the system - an earthquake in Japan - can have a disproportionate impact on an output of the system - share values on global stock markets. Rather than reflecting a loss of productivity proportionate to the size of the Japanese economy, a sudden change in one part of the system can have an effect on global investor confidence - leading to systemic change. The global economic system is *dynamic* in that the nature of economic relationships between countries and global businesses changes continually and cannot be understood other than by a representation of those relationships in a particular moment in time.

A complex systems paradigm is useful in the modelling of human motivation because this paradigm offers tools for understanding the relationships or dynamics that characterise a phenomenon rather than simply its constituents. It can be used to reference the variety of factors that might contribute to a phenomenon and relationships among those factors. This can allow for the development of “*high leverage*” methods of influencing a system.

4.2.2. Leverage in Complex Systems

A “*high leverage*” method of influencing a complex system is a method by which the results of the intervention are disproportionate to the strength of the initial input because such intervention is made with an understanding of the dynamics of the system (Senge, 1990). A simple but high leverage intervention may have a large effect on a system as a whole. One might consider the problem of back pain suffered by many people in modern society. From a reductionist, perspective, the appropriate way to address this problem is to reduce it to its area of affect – a particular vertebra impinging a nerve. The solution to relieving pain is to operate on that vertebra to relieve that pressure.

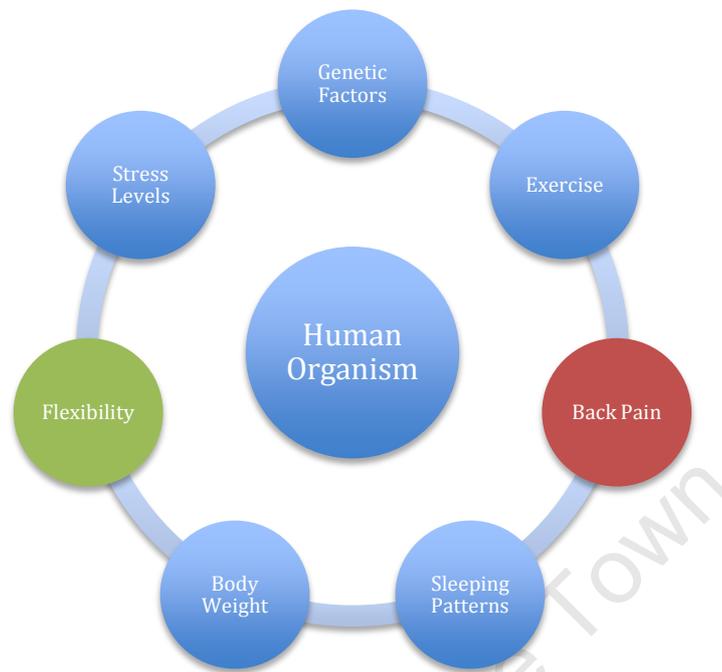
Figure 8. A Linear Approach to Resolving Back Pain



From a complex systems perspective however, back pain is one quality of a complex system – the human organism. From this perspective, a variety of factors are seen as contributors to the system of which back pain is a single property. Such factors might include the weight of an individual, their exercise routine, their posture, the genetic heritage of their parents, their sleeping positions or their level of stress at work.

By understanding the dynamics of the system as a whole, a point of high leverage may be found at which to intervene in the system with best effect. It may be found, by modelling the dynamics of the system, that the individual with back pain runs several times a week and has shortened hamstrings that lead to poor posture and excess stress being placed on the spine. Stretching exercises may prove a higher leverage and longer term method of relieving the problem than an operation.

Figure 9. A Non-Linear Model of Back Pain

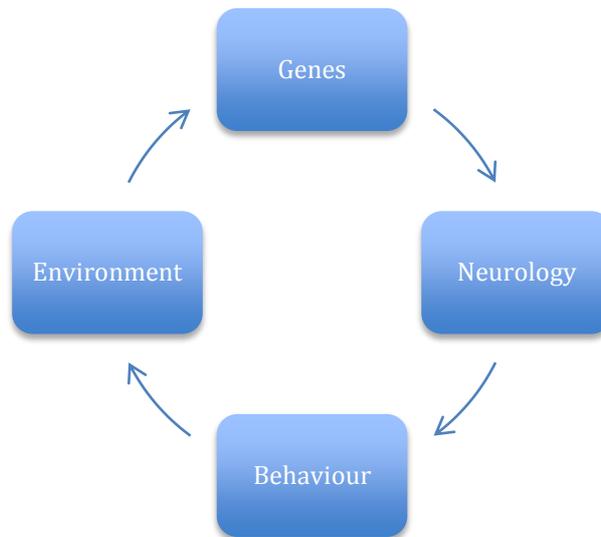


This example also highlights the principle that, when seeking leverage in complex system, the cause and effect of a problem are not necessarily co-located in space or time (Senge, 1995). Therefore a broader view of the dynamics of a system is useful when seeking points of leverage.

4.2.3. Feedback Loops in Complex Systems

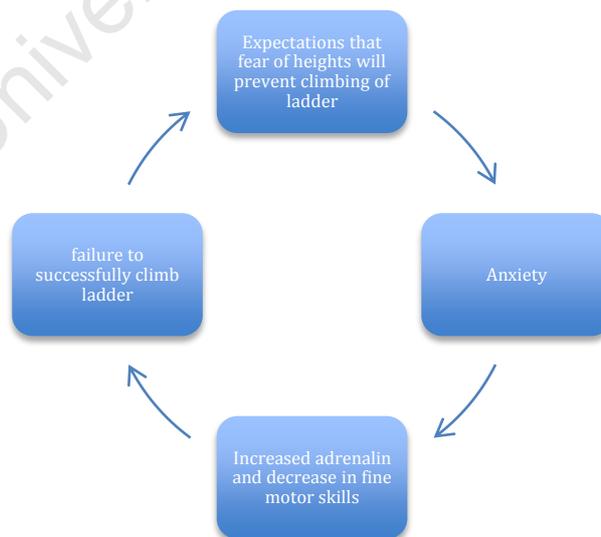
Any single factor in a complex system has the potential to affect the other factors. These interactions can form “feedback loops” (Senge, 1990). A feedback loop is a sub-system that is self-reinforcing. Drawing again on the example of social anxiety from chapter two and referring to Figure 10 below, an individual may have a disposition to social anxiety in their genes that gives rise to particular qualities of their neurology. These qualities lead the individual to behave in awkward ways around others. This awkwardness leads others to reject the individual resulting in negative environmental feedback. This feedback can then influence how genes are expressed in the individual – reinforcing the cycle and setting up a feedback loop (Rosenstein, 2011).

Figure 10. Example of a feedback loop in human psychology



Another example of a feedback loop in the human motivation system often discussed by coaches and self-help writers is how a person's expectations can become their reality. A person has an expectation that they will not be able to perform a physical task like climbing a ladder. That expectation creates anxiety in their system, changing their neurological state, affecting their motor functioning and resulting in a failed attempt to climb the ladder. The failed attempt then serves as evidence to reinforce the expectation that future performance will fail setting up a feedback loop.

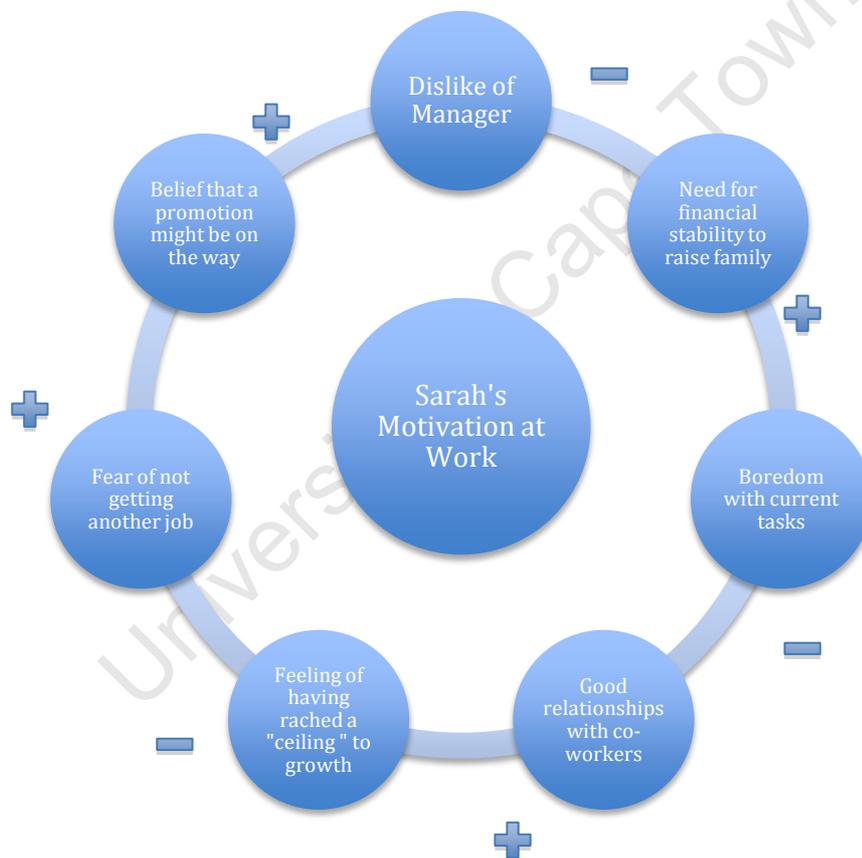
Figure 11. A causal loop of expectations



4.3. Work Motivation as a Complex Non-Linear System

Work motivation is best modelled as a complex system because it is both non-linear and dynamic. Multiple evolutionary, environmental, cognitive and neurological factors influence an individual's motivational system at any given moment in time. It is important to understand the interaction of these variables in ways that allow for the identification of systemic dynamics and methods of high leverage intervention. Consider the fictional example of factors influencing the work motivational system of an office worker "Sarah" in Figure 12 below:

Figure 12. Factors influencing Sarah's Motivation at Work

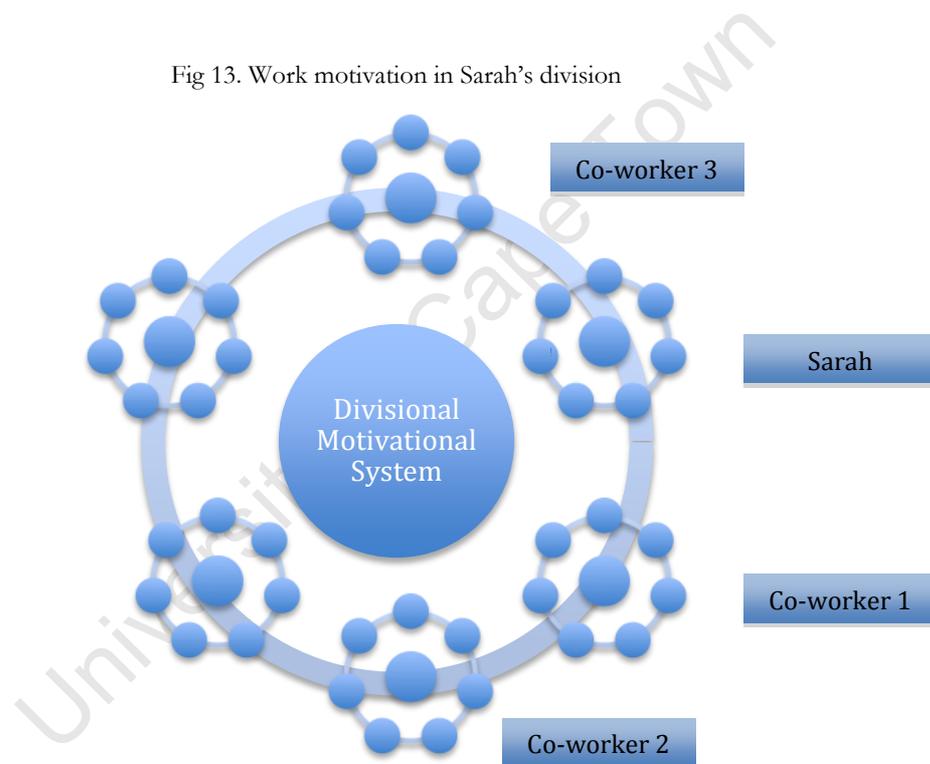


In the figure we see that a range of variables influence Sarah's motivation in her work in any given moment. Some are motivating (indicated by a plus sign) and others are demotivating (indicated by a minus sign). The direction and qualities of Sarah's motivation will depend on how these factors interact over time. There may be points of high leverage in the system for encouraging her motivation. For example, Sarah's need for financial stability may be high and so the promise of a salary increase may be particularly motivating

to her. Alternatively, her good relationships with co-workers may be the only thing keeping Sarah in the job. If a particular co-worker were to leave the company, this may lead Sarah to leave too.

Now, consider Sarah's particular division where she is one of six employees. Each employee has their own system of motivation – and each employee has an influence on the motivational systems of the others. Not only do we have a complex system of variables influencing the motivational systems of one individual, we now multiply this complexity by having each system interact with the other systems. A linear approach to modelling motivation would hold that each of Sarah's co-workers has similar motivational drivers. The reality is that each has a unique system of motivation with its own dynamics.

Fig 13. Work motivation in Sarah's division



Now consider a situation in which the managing director of Sarah's company wishes to better understand and influence the motivation of his or her staff. Acting according to a linear model of motivation he or she might decide to offer an across the board pay increase, create a performance based incentive system or hold a morale raising event. Such actions would be based on a generalized understanding of motivational factors that influence human beings but would not be based on an understanding of the dynamics of *this particular* organizational system. They are unlikely to be high leverage methods of intervention. For example, Sarah's team may have a particularly poor manager who is disliked by all of their

reports. Providing an organization-wide pay increase will likely influence the team's motivation in a positive manner but this may be a low leverage intervention - particularly in the case of Sarah's team where the problem with their manager is an overriding factor. If the managing director of the company were able to have his or her attention drawn to the particular motivational dynamics of Sarah's team, the problematic relationship with their supervisor might be addressed through a higher leverage intervention targeted at improving this relationship.

To help a manager to achieve a better understanding of the dynamics of a particular work motivational system, a way of modelling the system in a manner that retains rather than reduces its complexity is required. Modelling an organizational motivational system in this manner requires four main components:

- Motivational variables to include in the modelling process.
- A way of assessing the collective influence of this set of motivational variables on a group's motivational system.
- A non-linear method of analysing the resulting data to look for useful patterns in motivation.
- A method of interpreting these patterns

The first two variables are commonly used in linear approaches to modelling work motivation. The major difference of a non-linear model lies in the second two variables - in how motivational data is analysed and interpreted.

4.3.1. Motivational Variables to Include in the Modelling Process

As discussed in Chapters 2 and 3, a variety of evolutionary imperatives, neurological systems, cognitive processes and environmental factors influence the human motivational system. Including *all* of these variables in a model of motivation designed for the workplace is impractical. For example, an individual may have a genetically inherited predisposition towards social anxiety that influences their motivation. In practical terms, assessing the genetic predispositions of office workers is not possible with current technology. Instead, motivational variables that can practically be assessed must be selected.

As described in the review of literature, a broad variety of variables that can be assessed in qualitative or quantitative terms exist in the literature on human and work motivation. The question so arises of how to select variables for inclusion in a modelling process of a motivational system. There is no hard and fast answer to this question. The exclusion of variables reduces the complexity of the representation of the motivational system. The choice to include other variables potentially biases the resulting model in ways that detract from its usefulness and accuracy in representing a real-world motivational context. Despite these facts, for practical reasons of collecting data, variables must be selected.

It is difficult if not impossible to argue on the basis of the literature which variables are “better” than others or more deserving of inclusion in a modelling process since the effort is not to suggest that one theory is correct while another is incorrect. The effort is rather to suggest that each variable represents a valid dimension of motivation that can be useful in the visualization of a complex motivational system. The variables chosen for this study each contains strong grounding within the literature with a bias towards theories that continue to be discussed in present day literature. Alternative variables could be selected and indeed should be selected when seeking to replicate the methodology of this study within a different context. The effort should be to, through a process of experimentation, discern which variables provide interesting and useful results when modelling motivational systems in an organizational context.

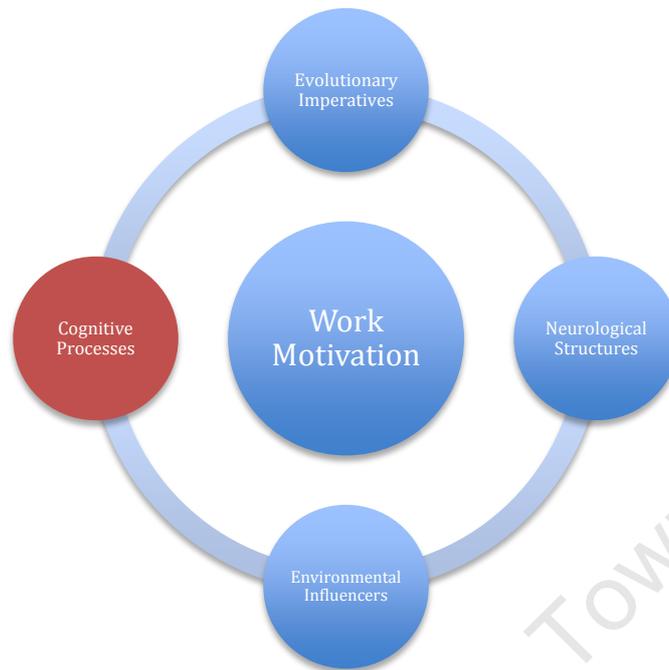
As a proof of concept, this study purposefully draws on variables from a broad range of psychological theories of motivation to show how such theories can be combined in the representation of a motivational system. Future studies may focus more on cognitive variables or evolutionary variables or behaviourist variables depending on the focus of a given study and the needs of the researcher or context. The purpose of this study then is not to represent a definitive theory of motivation but rather an alternative approach to the study of motivation that differs, in its appreciation and representation of complexity, from other approaches.

conscious being to explain or justify a conscious individual's existence or non-existence (Bernard et al, 2005).

Table 7. Evolutionary Imperatives Influencing Human Motivation

Summary Variable	Established Motivational Variable and Proponents
Power or control	Power (McClelland) Dominance; Aggression; Acquisition (Murray) Self protection (Bernard, Mills, Swenson, Walsh)
Security or certainty	Pain Avoidance (Murray) Existence (Alderfer) Shelter and Sustenance (Maslow) Self Protection (Bernard, Mills, Swenson, Walsh)
Variety or novelty	Play (Bernard, Mills, Swenson, Walsh)
Approval of others	Affiliation (McClelland) Social Belonging (Maslow) Relatedness (Alderfer) Relationship maintenance / Coalition formation (Bernard, Mills, Swenson, Walsh)
Achievement or personal growth	Achievement (Murray; Maslow; McClelland) Growth (Alderfer)
A sense of meaning	Self Actualization (Maslow) Meaning (Frankl) Memetic (Bernard, Mills, Swenson, Walsh)

b) Cognitive Processes

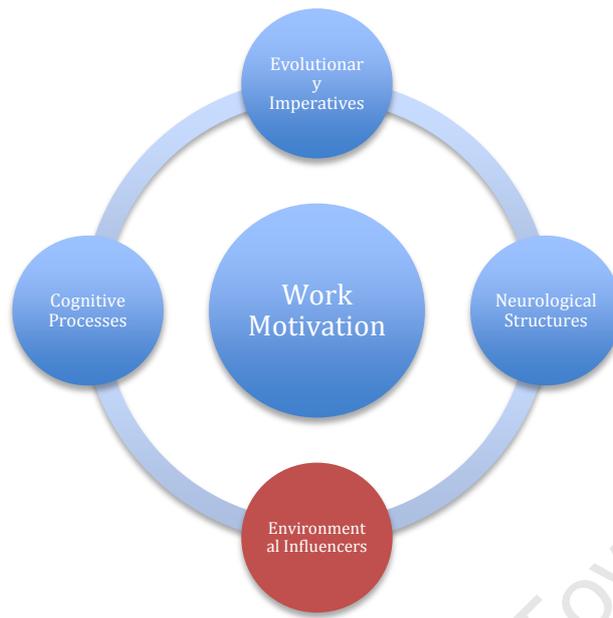


As discussed in Chapter 2, a variety of cognitive processes have been shown to influence human psychology. Among the most celebrated is Victor Vroom’s theory of expectancies (Vroom, 1995). Vroom’s theory states that, among other factors, the perception that one has the abilities required to achieve goal and the perception that a goal is in fact achievable (in broader terms than just one’s abilities) play important roles in the governance of motivational energy.

Table 8. Cognitive Factors Influencing Human Motivation

Summary Variable	Established Motivational Variable and Proponents
Perception of self efficacy	Positive Self Image (Heider) Consistent Self Perception (Festinger) Perception of Self Efficacy (Vroom; Fishbein Bandura)
Perception of achievability of goal	A likely, short term outcome (Tversky; Kahnemann) Perception of achievability (Fishbein; Vroom)

c) Environmental Influencers



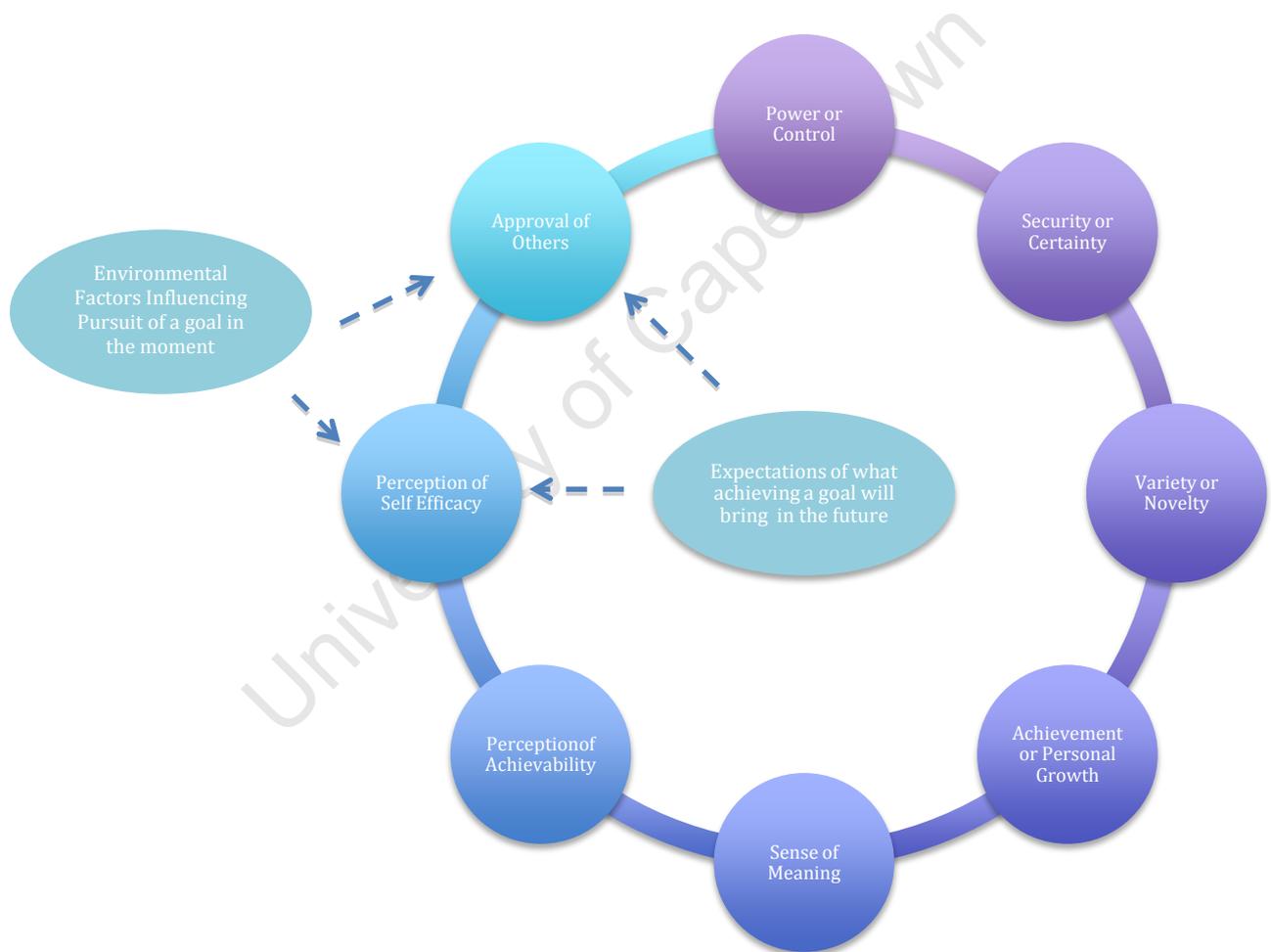
Behaviorist psychologists emphasised that environmental factors influence human behaviour (Skinner, 1948). When pursuing a work goal, an individual is influenced not only by their desires to receive certain types of feedback from achieving their goal but are also influenced in the moment by environmental factors. For example, an individual may be motivated by the belief that achieving a promotion at work will bring them recognition from their social network of family and friends. However the same individual may experience negative social feedback from their family while pursuing their goal due to long working hours spent in pursuit of the promotion. Hence many motivational factors can contain both elements of current experience and future expectation. An exception is made for the factor of achievement or personal growth since such factors are typically outcome related rather than experienced in pursuit of a goal.

Table 9. Environmental Factors Influencing Human Motivation

Summary Variable	Established Motivational Variable and Proponents
Environmental Feedback influencing sense of power or control; security or certainty; variety or novelty; approval of others and sense of meaning	Hull; Skinner; Rotter; Bandura

The evolutionary, neurological, cognitive and environmental factors discussed can be brought together into a model represented by Figure 14. It is important to note that each variable of motivation described influences an individual both in the moment and in their expectation of what the future may bring. So for instance, a man swimming across a fast moving river may experience a sense of fear of drowning while in the river but simultaneously have the expectation that reaching the other side will bring some reward. The man is influenced by motivational factors in the moment as well as motivational factors relating to his expectation of reward once his goal is achieved.

Figure 14. A Non-Linear Conceptual Model of Work Motivation



The model does not represent a definitive or exhaustive list of factors that influence motivation. Nor does it represent a hierarchy or particular arrangement of motivators. Rather the model identifies motivational variables that can reasonably be said to represent factors of importance in the motivation systems of workers. In other words the intention is

not to say that these factors “cause” motivation in workers but rather that an arrangement of these variables is capable of representing a work motivational system. As an example, an economist will select from a variety of variables when constructing an economic model. Some variables may be excluded because they are difficult to measure with accuracy or because they are not expected to have a significant influence on the system.

4.3.2. Method of assessing the influence of each motivational variable on a motivational system

While researchers in the neurosciences continue to explore methods of assessing psychological states objectively through brain scanning techniques (Liebermann 2007), such techniques are in their infancy. Current technology does not exist in a form that allows for practical assessment in the context of a complex workplace. As an alternative, self-assessment is commonly used in the psychological sciences as a method of establishing the subjective experience of psychological states (Viney and King, 1993). A self-assessment method relies on a subject’s impression and interpretation of their own emotional states. This method has limitations and these are discussed as a limitation of the experimental design of the fieldwork of this study. When approaching a question like work motivation however, the subjective impression of emotional states is a practical method of obtaining data.

4.3.3. Method of analysing data

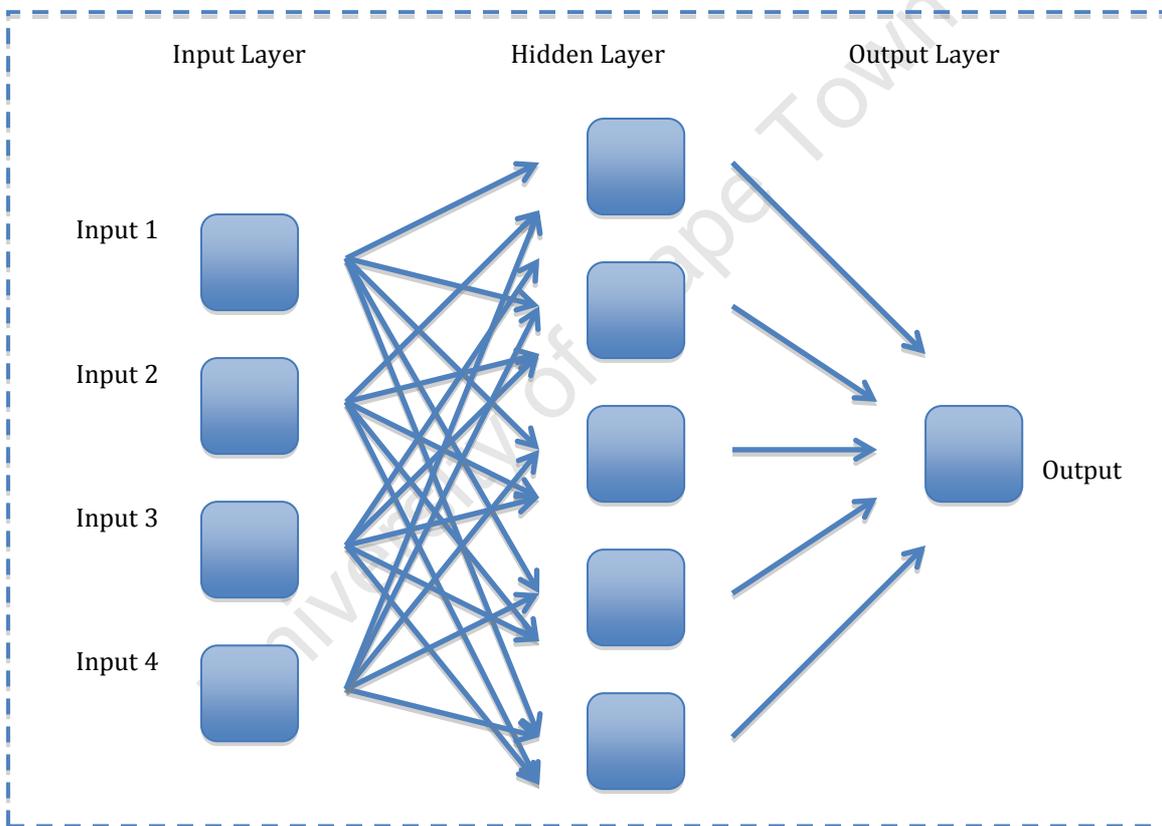
The point of greatest departure of a non-linear model of work motivation from linear models lies in the manner in which motivational data is analysed. Most statistical methods of analysing data function on the basis of reductionism. Such methods act to “reduce” or compress a set of data to make it more intelligible. So for instance one might take a selection of motivation factors, ask workers to rate the importance of these factors to them in their work and then calculate average results to determine which factors are more or less important to that particular group. In contrast, the modelling of complex non-linear systems seeks to retain the complexity or individual difference of a system where possible rather than to reduce it. Instead of averaging responses, data is analysed in a manner that allows outlying variables and patterns within that data to be identified.

When approaching methods of modelling non-linear data, a source of inspiration can be found in the human brain. The brain is functionally adept at modelling complex non-linear

data since this is the kind of data that characterises most real-world scenarios (Putnam, 1981). For example, the human brain is capable of coordinating the firing of different muscles in the process of walking up an uneven mountain path because it is able to take visual signals (non-linear complex data about the layout of the path ahead) and process those signals on the fly resulting in the triggering of muscle groups that retain balance.

A prominent theory of how the brain models complex non-linear data is termed the connectionist theory of mind (Rosenblatt, 1958). According to the connectionist model, the brain functions on the basis of parallel distributed processing (PDP). A PDP network

Figure 15. A Connectionist Computational Model



is comprised of a number of interconnected units. Each unit has a “level of activation” or threshold at which that unit will fire and pass a signal on to other units in the network. Figure 15 shows an example of a PDP network. In the figure, the input layer represents information entering the system. This is analogous to information entering the brain from the visual sense. The hidden layer represents neurons in the brain that process the information on the basis of the activation levels of each neuron. The output layer represents information emerging from the system – analogous to motor neurons in the

human brain that govern muscular action. Taking again the example of walking up a mountain path, input data would be visual sensory data supplied by the eyes about the topography of the path ahead. This input data passes through a network of neurons with individual neurons either firing or not firing depending on their particular activation levels. Motor neurons in the output layer then either fire or do not fire depending on the signals that emerge from the hidden layer of the neural network. The resulting flow of information is non-linear in that the brain is not taking a single snapshot of visual data, applying a rule of processing to that snapshot and then outputting a set of instructions to the motor neurons as a typical computer program would do. Rather, visual data is continually fed from multiple sources into the network, processed by the hidden layer and output in a non-linear manner to the motor neurons. This allows the brain to navigate tasks that have a high degree of variability, complexity and uncertainty – tasks that computers, with linear processing models, may fail to complete (despite their faster linear computational processing capacity).

Figure 16. A high level representation of visual data processing based on a linear computational approach

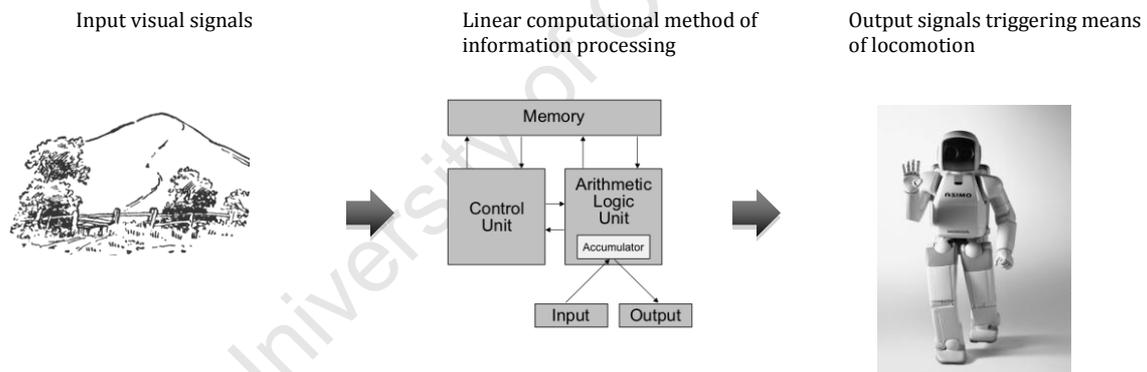
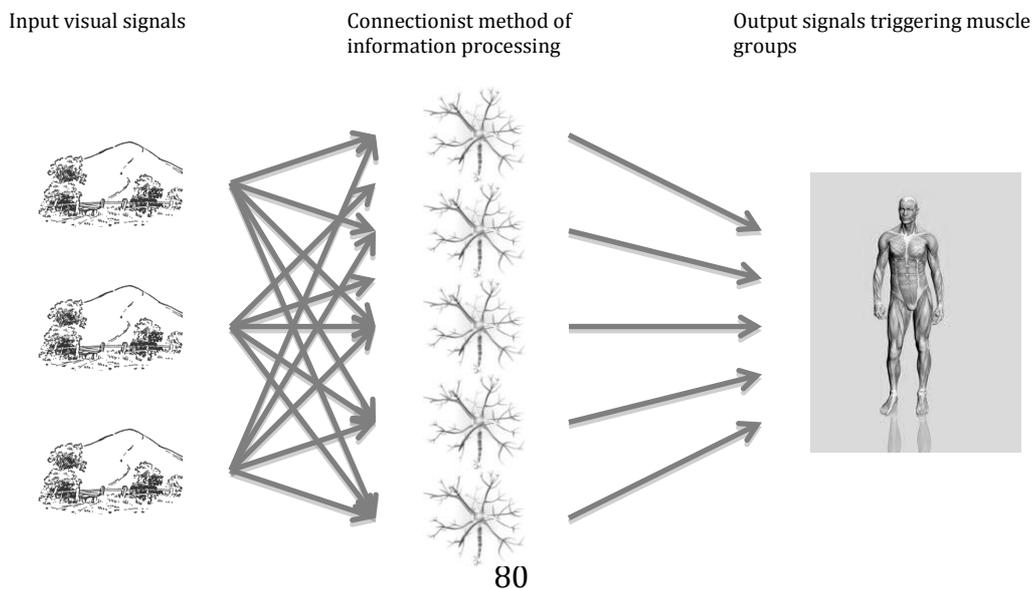


Figure 17. A high level representation of visual data processing based on non-linear connectionist approach



Figures 16 and 17 contrast a linear model of information processing such as a machine or computer might use with a non-linear model of information processing such as the human brain might use according to a connectionist theory of mind. In Figure 16, data is input from a single source, processed in a linear manner using a “Von Neumann” computational architecture (Turing, 1936) and the resulting information is used to trigger means of locomotion. In contrast, Figure 17 shows a connectionist approach to processing visual data. Data is input from the various visual receptors and passes through a neural network that uses a PDP approach to process variation in the path ahead and tell the muscles how to respond. The disadvantage of the computational approach is that it depends on a set of rules contained within memory for how to respond to variation in surfaces. If the variation is unexpected or unfamiliar – and not contained within the set of rules - then the system breaks down and is unable to accurately tell the muscles how to fire to maintain balance. This is one of the reasons why man-made machines driven by artificial intelligences founded on a linear computational approach to problem solving have proven limited in their capacity to navigate surfaces that show unanticipated variation

Efforts to replicate the PDP manner in which the brain is thought to process information typically use artificial neural networks as simulators of the human neural net. An artificial neural network (ANN) is a mathematical model based on a connectionist theory of mind (Hebb, 1949). ANNs are composed of interconnected nodes or “artificial neurons” connected to each other through mathematical relationships defined by an algorithm. A supervised neural network is trained using a pre-established data set to establish connection weights. As an example, speech recognition programs often have to be “trained” by their user in order to function. The process of training tells the program what kind of auditory parameters can be expected when an individual speaks a given word. Because of their error tolerance, ANN’s allow the program to recognize variations of that word (that may be the result of stress levels of the speaker or acoustic qualities of the environment) that fall within the original training parameters.

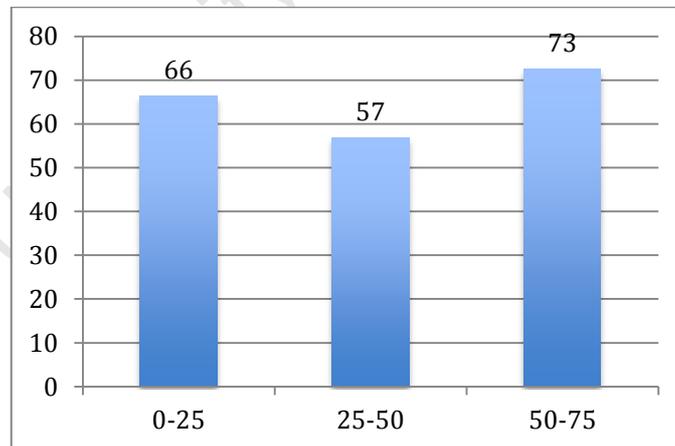
An unsupervised network in contrast can be used to find patterns in complex data without prior training of the network. One use of unsupervised artificial neural networks is to find and highlight patterns in a data set by “clustering” data into different groups based on the qualities of each group. Consider for example a group of ten men whose ages and weights are known (listed in Table 10 that follows):

Table 10. Ages and Weights of Men

Man	Age	Weight (kg)
1	23	55
2	45	70
3	54	78
4	32	54
5	19	51
6	23	74
7	57	67
8	44	62
9	41	88
10	24	85

A typical linear method of analysing the relationship between age and weight contained in this data would be to plot a histogram of average weights clustered by age group as per Figure 18 below:

Figure 18. Average Weights by Age Group



An unsupervised ANN approach however, rather than reducing differences in data, acts to highlight difference. In Table 11 we see for instance that there are two groups of younger respondents. One group that has a relatively low weight and another that has a relatively high weight:

Table 11. Two Clusters of Young Men's Weights

Person	Age	Weight (kg)
1	23	55
2	45	70
3	54	78
4	32	54
5	19	51
6	23	78
7	57	67
8	44	62
9	41	88
10	24	85

The linear process of analysis undertaken in Figure 18 compresses these differences to a mean. In contrast an ANN clustering process may help to draw out and identify those differences.

Returning to the application of modelling complex non-linear motivational data, in an organization of fifty people each person has their own motivational system with its own set of unique variables and interactions. The standard approach to understanding the motivational patterns of this group would be to reduce or compress information about these motivations using statistics. One might find, for instance, that the individuals making up the group on average find the level of income they receive very motivating but the social climate of their workplace less motivating. The problem with this approach is that it does not take into account individual difference or the unique dynamics of individual or group motivational systems.

An alternative approach to understanding the motivations of the group is to cluster group member's responses to questions about motivations using an unsupervised ANN clustering process. This process will highlight variation in the data by identifying and grouping similar outlying responses. One might find a pattern showing that 70% of the staff are happy with social dynamics of the group – but that 30% are unhappy – and that most of these 30% work for a particular manager. One might investigate further and gain understanding of why that 30% feel the way they do and how this success can be replicated in other areas of the business as a high leverage approach to influencing worker motivation in the system.

4.3.4. Method of interpreting results

An ANN clustering process is useful in the context of understanding the motivations of a group specifically because it draws out rather than compresses differences in data. Say for example one wanted to know how secure the employees of a company felt in their jobs. One approach would be to ask them to rate their level of security on a scale of one to ten. Performing a standard statistical analysis one might find that on average the employees feel 70% secure in their jobs. In contrast, a process of artificial neural network clustering would not compress the variables to a mean but would identify outlying patterns in the data. This process may reveal that in fact 80% of employees feel 80% secure in their jobs while 20% feel only 40% secure. Looking at the characteristics of the 20% cluster one might find that it consisted of an unusually high proportion of female employees. This might lead to a useful understanding of how to adopt a high leverage intervention in improving feelings of job security of this group.

The usefulness of an ANN method is amplified when dealing with more than one variable. Say for instance variables now being tested are: how happy employees are with their salaries, how happy they are with their managers and how happy they are with their levels of responsibility. A conventional statistical analysis would not necessarily succeed at drawing out outlying relationships among these factors. For instance it might be the case that a small proportion of employees is extremely unhappy with both their managers and their levels of responsibility suggesting a potential relationship between these two factors. ANN clustering can succeed in identifying unanticipated outlying patterns or relationships because it relies on a set of data itself for its method of information analysis rather than an pre-existing external assumption of what patterns within the data might be. This quality is useful when considering human motivation as a systemic property involving the interaction of multiple motivational variables.

4.4. Summary and Analysis of the Conceptual Model of Human Motivation

Work motivation during the 20th century was modelled on the basis of three principles: reductionism, linearity and Newtonian causality. In contrast, researchers in the 21st century are showing that human motivation emerges from the interaction of evolutionary imperatives; neurological structures; cognitive processes and environmental conditions in a

non-linear, dynamic, complex manner. Given the complexity of interaction of these factors, motivation is better modelled as a complex system than a linear equation.

Modelling a complex motivational system requires a set of motivational variables to include in the model; a method of assessing the relationship of the set of variables to an individual; a non-linear method of modelling these relationships and a method of interpreting the results. A variety of motivational variables can be included in such a model – however each should have grounding in established schools of psychological thinking and be suitable for self-assessment by workers in an organizational setting. Unsupervised artificial neural network clustering can be used to find outlying patterns in complex, non-linear motivational data. Such networks function on a basis of parallel distributed processing to find patterns in data without the requirement of a pre-existing governing principle. Resulting clusters can be analysed to look for outlying motivational variables and demographic qualities that signal the potential for high leverage intervention in a motivational system.

The standard approach to managing human beings in an organizational context has been that of seeking to compress the identities of individuals and their complex psychologies to a mean value. The idea is that this should make a diverse work force easier to understand and influence. The result of this paradigm of managing people has been a disconnection between the fantasy of organizational design and the reality of human psychological processes. A complex systems approach to understanding and influencing people using tools of non-linear analysis like artificial neural networks has the potential to help bridge the divide between the organic and the organizational

Chapter 5

Field Work: Modelling Motivation in the Workplace Using Artificial Neural Networks

University of Cape Town

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Field Work: Modelling Motivation in the Workplace Using Artificial Neural Networks

This first part of the fieldwork uses artificial neural network clustering to model the motivational systems of four groups of workers, each with a different career orientation. The purpose is to test whether the non-linear conceptual model of work motivation developed in Chapter 4 of this thesis can be used to identify outlying motivational characteristics of groups of working professionals. By treating work motivation as a complex system rather than a linear equation and retaining some of the complexity of that system rather than reducing it, it is anticipated that resulting models of work motivation will provide a useful basis from which to influence motivation in these systems.

5.1. Population and Sample Groups.

Four groups of people with differing career orientations were chosen in which distinct patterns of motivation might be expected to occur. Non-probability samples were taken of fifty representatives for each group totalling two hundred respondents. A convenience method was used to conduct sampling because of the logistical difficulty of establishing true random samples of such niched groups. The criteria for inclusion in each group are defined in more detail below. Detailed demographic features of each sample are presented in Appendix J.

a) Population Group 1: Creative Students

Creative students were defined as individuals enrolled for a minimum of three years in a state recognized institution for education in the creative arts. The creative arts were defined as: drama, fine arts, music, filmmaking, dancing, design and writing. Respondents representing this population group were drawn from the following institutions:

- University of Cape Town Fine Arts College
- University of Cape Town Drama School
- University of Cape Town College of Music and Ballet
- City Varsity Film School.

b) Population Group 2: Professional Creative Artists

Professional Creative Artists were defined as individuals who had derived their primary source of income in the creative arts for at least three concurrent years with no formal employment outside of this domain. Only individuals responsible for the actual creation of work and not individuals working in an administrative capacity in the arts were selected. Respondents representing this population group were identified through an informal networking process among communities of creative artists.

c) Population Group 3: Business Entrepreneurs

Business entrepreneurs were defined as individuals responsible for founding and, at the time of sampling, the management of a business incorporated for at least three years – with no source of income outside of their self-founded businesses. Respondents representing this population group were drawn from:

- Finalists in the Ernst & Young Entrepreneur of the Year Award Program from the years 2007, 2008 and 2009.
- Business owners located in “The Bandwidth Barn”, a hub for entrepreneurial businesses in the technology sector located in downtown Cape Town.
- Clients of “The Business Place” a resource centre offering business and financial support to entrepreneurs located in downtown Cape Town.
- The South African Woman’s Entrepreneur Association.

d) Population Group 4: Business Managers

Business managers were defined as individuals who, at the time of sampling, had been employed for at least three years at a private commercial organization in a role of responsibility either for the entire business or a functional area of the business. Respondents representing this population group were drawn from short-term management

programs at the University of Cape Town Graduate School of Business representing a broad variety of industries.

5.2. Sampling and Survey Questionnaire

Sampling was undertaken during a four-month period between December 2009 and March 2010. A single researcher conducted all sampling, approaching individuals in their places of work or study and asking them to complete a research questionnaire (see Appendix D for a reproduction of the questionnaire). Subjects were given only the information that a survey on work motivation was being conducted through the University of Cape Town Graduate School of Business, that the survey was anonymous and would take approximately ten minutes of their time. They were asked to complete the form in the presence of the surveyor and encouraged to ask for clarification on any question the meaning of which was ambiguous or unclear to them. The fifteen motivation variables identified in Chapter 5 were used as a basis for the questionnaire. Respondents were asked to rate their strength of agreement or disagreement with statements relating to whether they felt that achieving an important work goal would bring them a certain motivational variable as well as whether they experienced certain motivational variables while pursuing their goal. (Feedback of personal growth obtained while pursuing a goal was excluded because personal growth was considered to be a factor dependent on the completion of a goal). Their degree of agreement or disagreement was rated on a seven-factor Likert scale. Respondents were also asked to answer six demographic questions: their age; gender; race; qualification; income and number of years of work experience.

5.3. Process of Analysis

NeuroXL (<http://www.neuroxl.com/>), a Microsoft Excel based artificial neural network classification package, was used to cluster responses from each sample group. A log sigmoid activation function was used in the clustering of the data. This activation function describes the output behaviour of each artificial “neuron” in the network. The log sigmoid function is given by the relationship:

$$\sigma(t) = \frac{1}{1 + e^{-\beta t}}$$

(Hagan, 2000)

Four clustering processes were performed on four different categories of the data:

- Creative students (50 respondents)
- Creative professionals (50 respondents)
- Entrepreneurs (50 respondents)
- Business Managers (50 respondents)

Different numbers of clusters were trialled, beginning with two clusters per data set and to a maximum of fifteen clusters per data set. The final number of clusters used for the study was set at the point at which the addition of new clusters failed to yield substantial new variations in data patterns. The means of responses to motivation questions for each cluster were calculated along with the variances of those means from the overall means of the sample being clustered. Demographic qualities of each cluster were also analysed by comparing the mean demographics for each cluster with the mean demographics for the sample. Demographic qualities analysed were: age; race; gender; years of work experience; income and level of qualification.

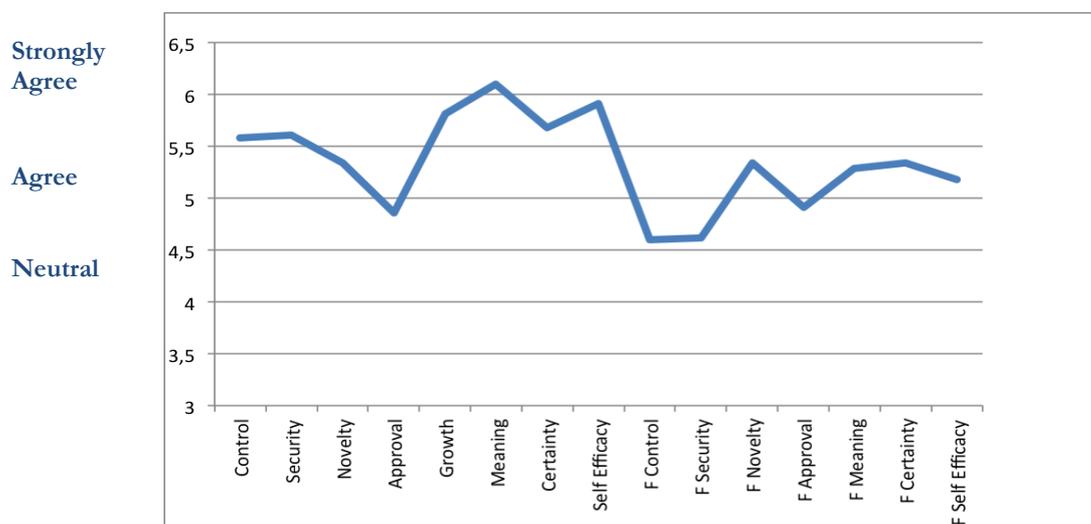
Outliers in responses to motivation questions present within each cluster were then identified with an outlier defined as a mean response of at least one variation from the mean of that data sample. Demographic outliers of clusters were also identified when there was at least a 20% difference in what might be expected to randomly occur within that cluster based on the sample demographics. These outliers in motivation responses and demographic qualities associated with these outliers are the outcome of the study, reflecting a non-linear visualization of significant patterns within complex motivational data.

5.4. Results

5.4.1 Motivation Data Description

To gain an overview of the data we first look at the mean responses of the total sample. In Figure 19 below we can see the strength with which respondents on average agree or disagree with the presence of each motivational variables in their work.

Figure 19: Means of All Responses



The graph shows that respondents, on average, agree with the presence of all the motivational variables in their pursuit of a work goal. The strength of their agreement differs from somewhat agree to strongly agree.

In Figure 20 we run the same process - only this time we calculate the means of responses for each career type individually. We also calculate the variances from the sample means of each motivational response in order to more easily see which factors are outliers from the each sample mean. We see in Figure 21 that average responses don't differ a great deal from one career type to another- and that the responses follow similar overall patterns. In Figure 21 we see that at most, the standard deviation of any single factor from the overall sample mean is 0.25.

Figure 20: Means of Responses by Career Type

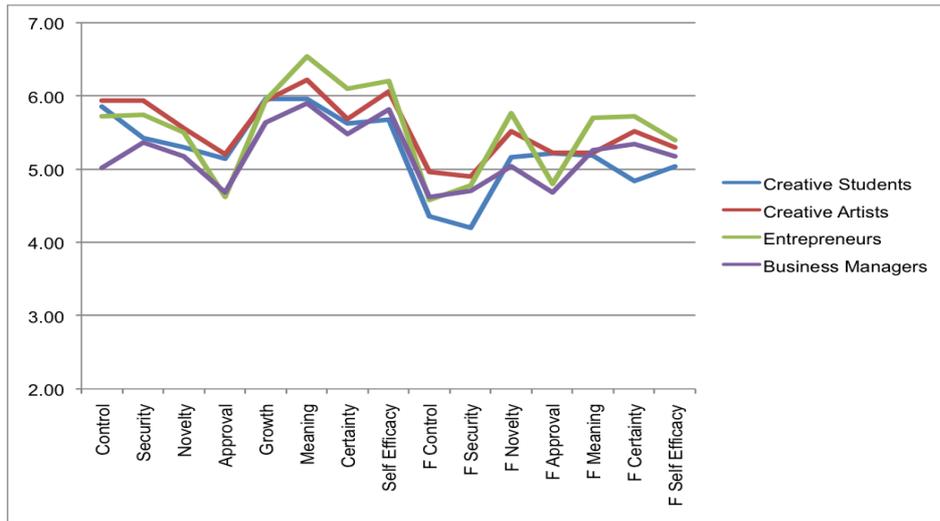
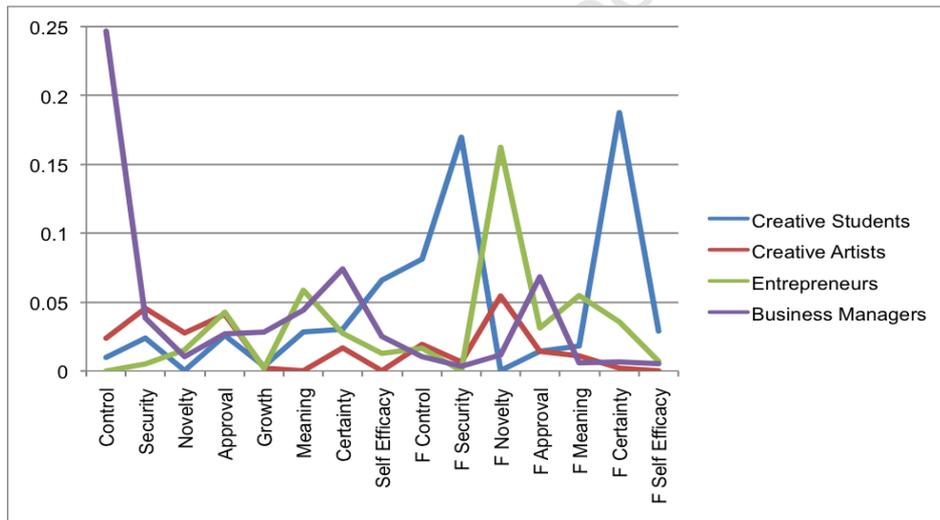


Figure 21: Variation from the Sample Mean of All Responses by Career Type



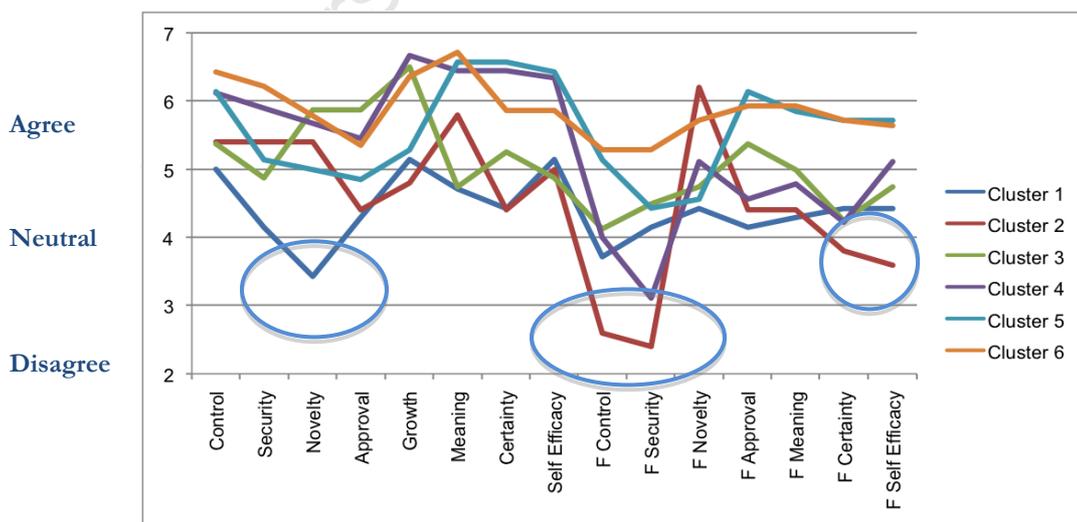
This reductionist approach to modelling the motivations of these groups suggests that respondents, on average have similar motivational patterns regardless of their career orientation (with some minor differences). The next step is to apply artificial neural network clustering to each sample group to see whether modelling the data in a non-linear manner reveals any variation within responses that may be useful in understanding motivational differences among these groups.

5.4.2. Clustering – Creative Students

To begin with, the responses of creative students are clustered using an unsupervised ANN clustering process. The clustering process was first run with the parameter of two clusters and then the process was repeated, each time adding an additional cluster. The purpose was to find the point at which variation between clusters first emerged and then, with the addition of further clusters, stopped being significant with similar patterns simply repeating themselves with small degrees of variation. For all clustering processes (creative students, professional creative artists, entrepreneurs and business managers), six proved to be an optimal number of clusters. Adding additional clusters failed to yield new clusters with significant variation.

Figure 22 shows the mean responses to motivational questions of each of the six clusters of creative students. We can immediately see that Cluster 2 deviates substantially from the mean on the factors of “Feedback of Control”; “Feedback of Security” and “Feedback of Self Efficacy” (circled in the figure). In other words the respondents in this cluster did not feel that they receive a sense of power and control, security and certainty or a sense of their own competence from their environment while pursuing their goal. Also, Cluster 1 deviates on the factor of Novelty.

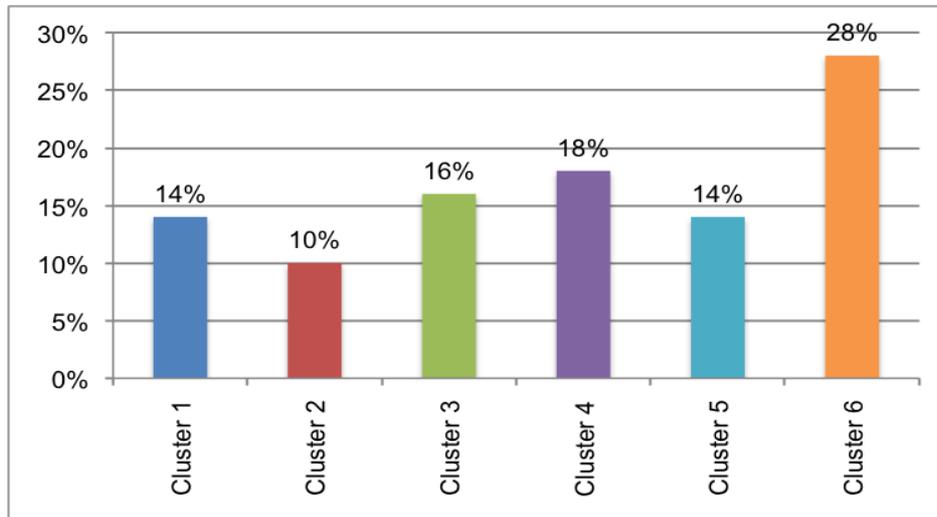
Figure 22: Creative Students, 6 Clusters, Means



In Figure 23 we see the size of each cluster relative to the sample group. So Cluster 2 for example – a cluster that shows some interesting variation - represents 10% of the sample of

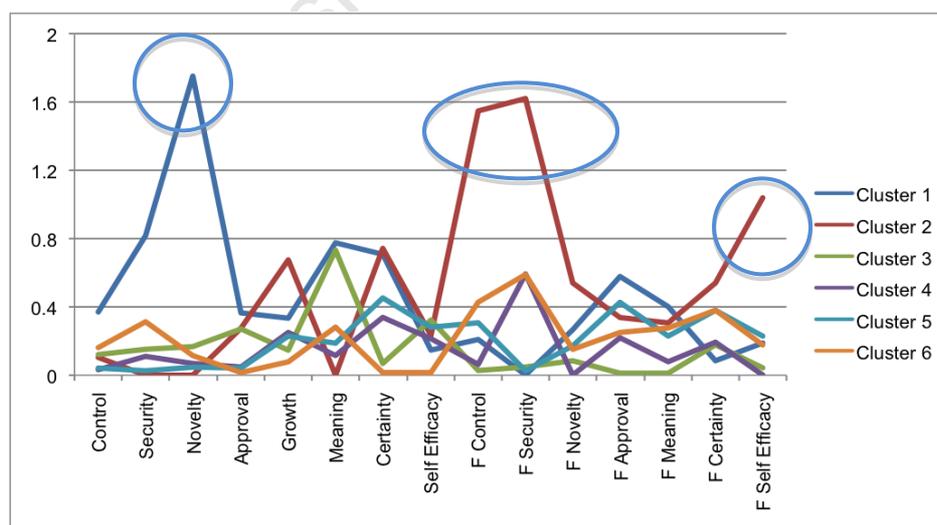
creative students. This is useful because it helps us to see how many creative students showed this variation in their responses.

Figures 23: 6 Creative Students, 6 Clusters, Proportions



Lastly, we calculate the deviations from the sample mean of each cluster. This is a more precise way of reflecting which factors of which clusters deviate substantially from the sample mean.

Figure 24: Creative Students, 6 Clusters, Deviations from Sample Means



In interpreting this data we can say that each of the six clusters shows some deviation from the sample mean, however only clusters one and two show *significant* deviation from the sample mean. This means that only Clusters 1 and 2 have patterns of responses that are

different enough from the average creative student's responses to be meaningful. In this study, a significant deviation was considered to be a minimum of one standard deviation from the sample mean. The choice of setting the significance at this level is made in order to keep the results manageable. The level of significance could legitimately be set at 0.5 deviations for instance, however clusters showing this degree of deviation for motivational factors would not necessarily be divergent enough from the sample mean to provide useful information. A different way of displaying the results of the clustering process is shown in Figures 25 and 26 below. Each figure represents one of the clusters that had significant variation from the mean and shows associated motivational factors. The colour of the variable denotes whether that factor is positively motivating (red) or demotivating (blue).

Figure 25. Creative Students - Significant Deviation in Cluster 1

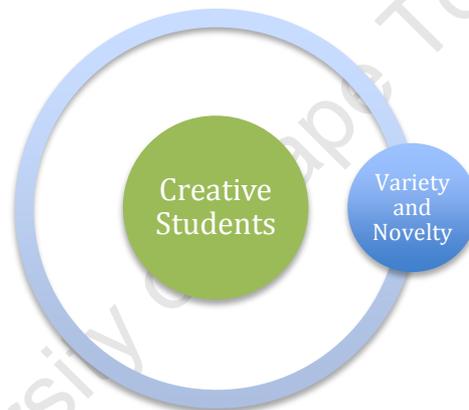
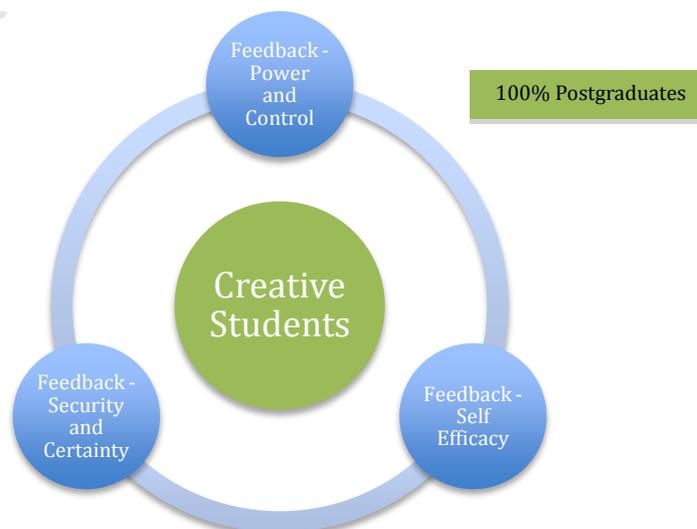


Figure 26. Creative Students - Significant Deviation in Cluster 2



The demographic qualities of each cluster were also calculated and noted when they were substantially different from the sample mean demographics. So in Figure 26 we see that 100% of the respondents in this cluster were postgraduate students. This was a very high proportion in comparison to the average qualifications of the sample mean.

In summary, these results indicate that 76% of creative students showed motivational patterns quite similar to each other and, to the overall sample mean of respondents with different career orientations. 24% of creative students however showed unique outlying responses. While this 24% is a small proportion, the outlying motivational variables it contains are useful because they may point to motivational dynamics unique to the motivational systems of creative students. The fact that Cluster 2 was made up entirely of post graduate students for instance points to the possibility that more qualified creative students might have a slightly different pattern of motivation than lesser qualified creative students. Also the motivational factors that are outliers in Cluster 2 seem to relate to each other. All involve feedback received from the environment while pursuing a goal and all relate to aspects of security or self-confidence. By pulling apart the data rather than averaging it to the mean, we are retaining some of the complexity of the data. By identifying outlying factors that differ from the mean we are taking note of unique qualities of some creative student's motivation systems that may hold useful information about the dynamics of their motivational systems.

5.4.3. Clustering – Professional Creative Artists

In clustering professional creative artists we again use six clusters and plot the mean results of responses for each cluster in Figure 27 below. We can immediately see more variation in clusters than was the case for creative students. However we can also see that factors of “F Control”, “F Security” and “F Self Efficacy” are again emerging as patterns as they did for creative students.

Figure 27: Professional Creative Artists, 6 Clusters, Means

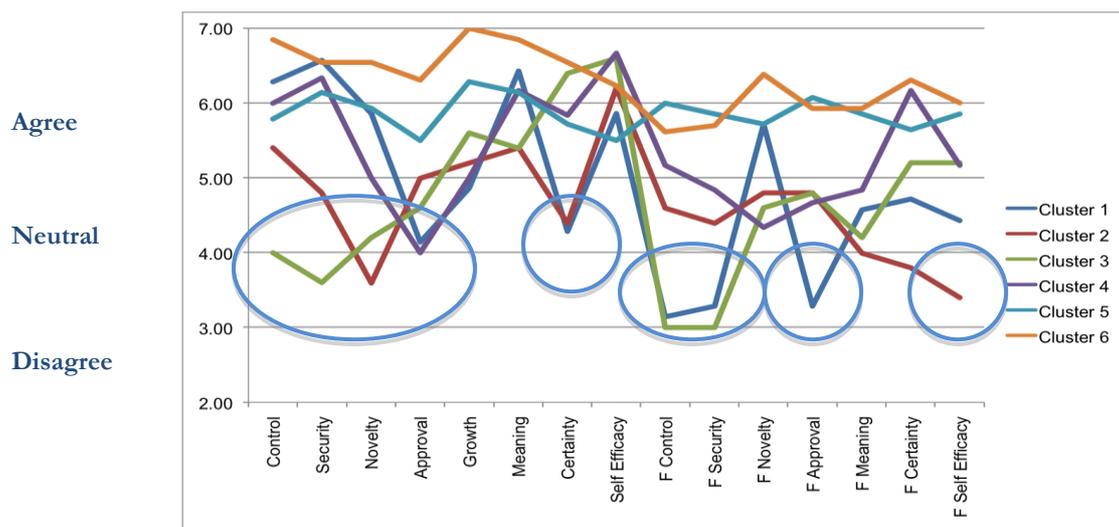
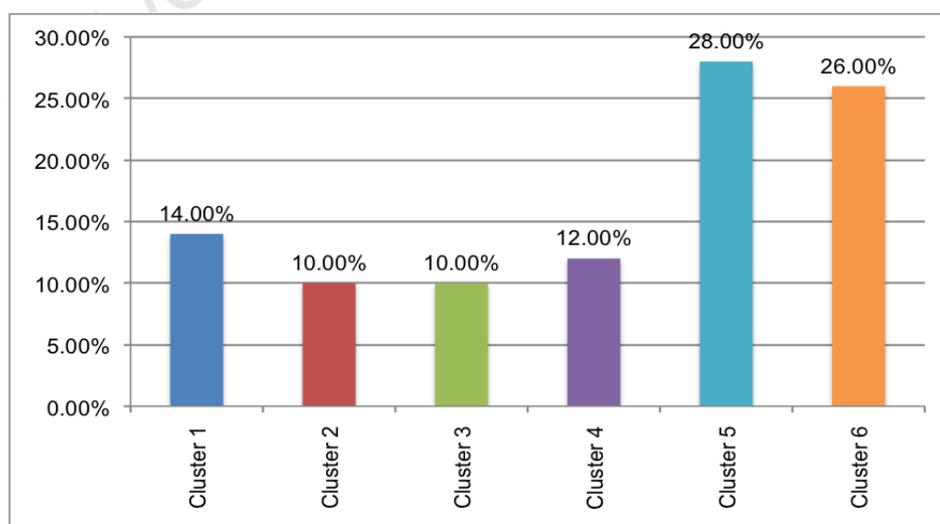
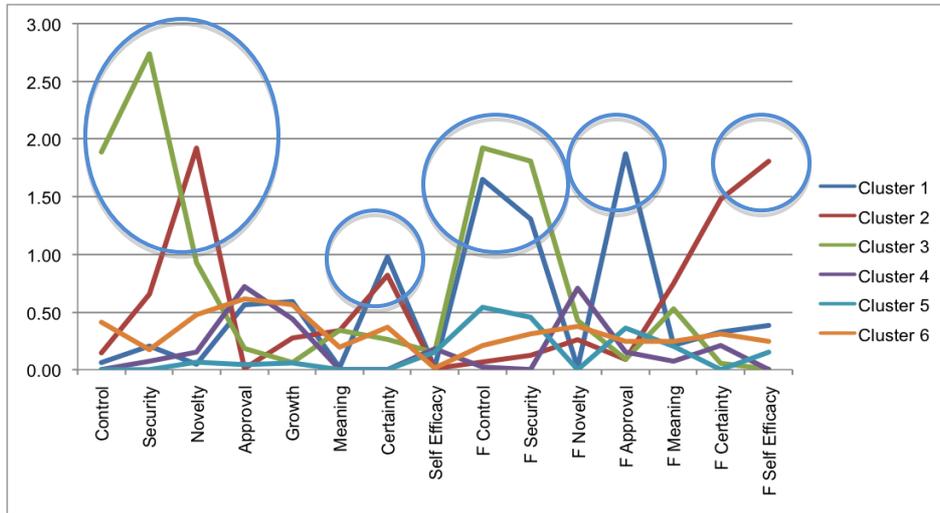


Figure 28: Professional Creative Artists, 6 Clusters, Proportions



Looking at Figure 29 below, we can see that Clusters 1, 2 and 3 show motivation factors that have variation of at least one degree from the sample mean.

Figure 29: Professional Creative Artists, 6 Clusters, Variances from Sample Means



We again represent these outliers in diagrammatic form, noting demographic outliers:

Figure 30. Professional Creative Artists - Significant Deviation in Cluster 1

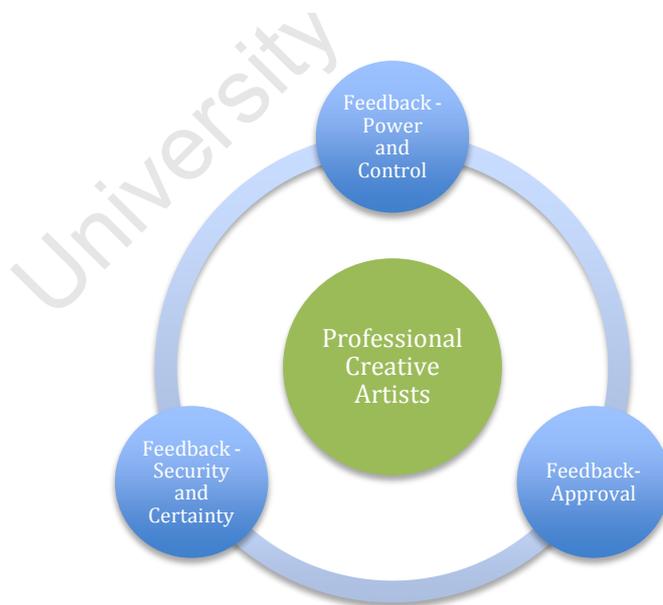


Figure 31. Professional Creative Artists - Significant Deviation in Cluster 2

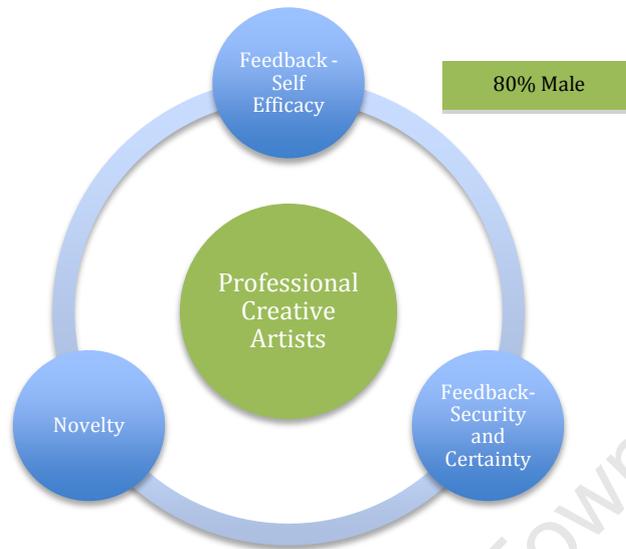


Figure 32. Professional Creative Artists - Significant Deviation in Cluster 3



It is interesting to note that, like creative students, factors of feedback of power and control; security and certainty and self-efficacy all emerge as negative motivators for groups of professional creative artists. Also, we again see some of the clusters having particular demographic qualities. This raises the question of – for example – could male creative artists have certain motivational patterns that are unique to their gender? Or, could older, more experienced and better-qualified creative artists also have their own pattern? Context for the responses of these groups is again required – and is provided in the second part of the fieldwork. We continue by performing the same process on the groups of entrepreneurs and business managers.

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5.4.4. Clustering – Entrepreneurs

Figure 33: Entrepreneurs, 6 Clusters, Means

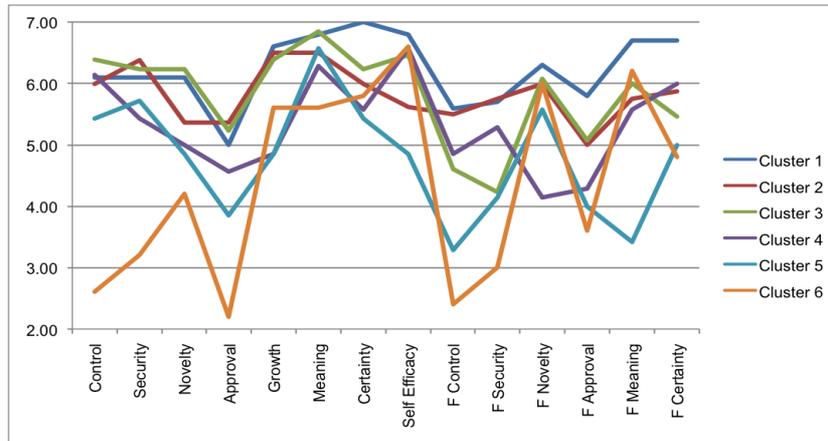


Figure 34: Entrepreneurs, 6 Clusters, Proportions

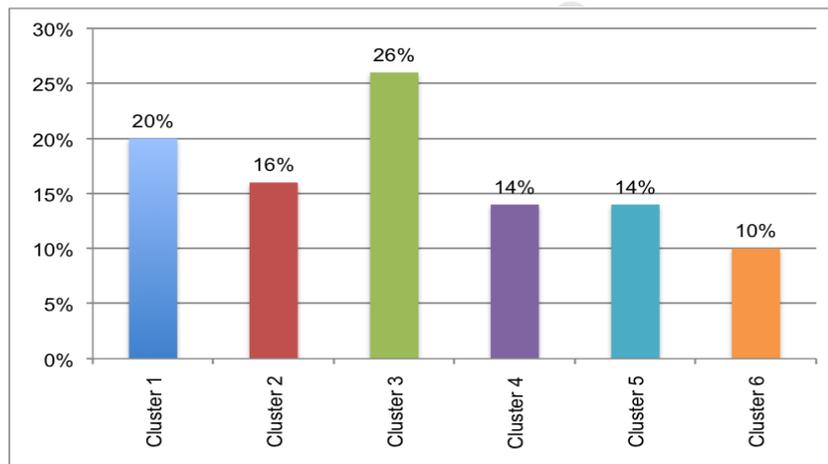


Figure 35: Entrepreneurs, 6 Clusters, Variances from Sample Means

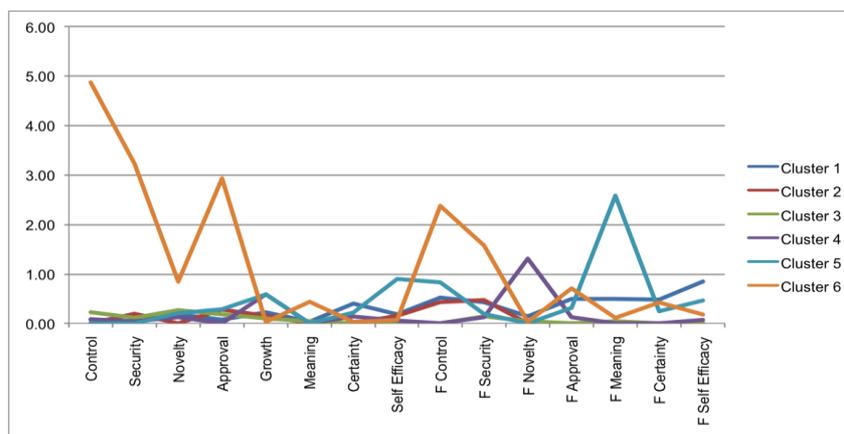


Figure 36: Entrepreneurs – Significant Deviation in Cluster 4

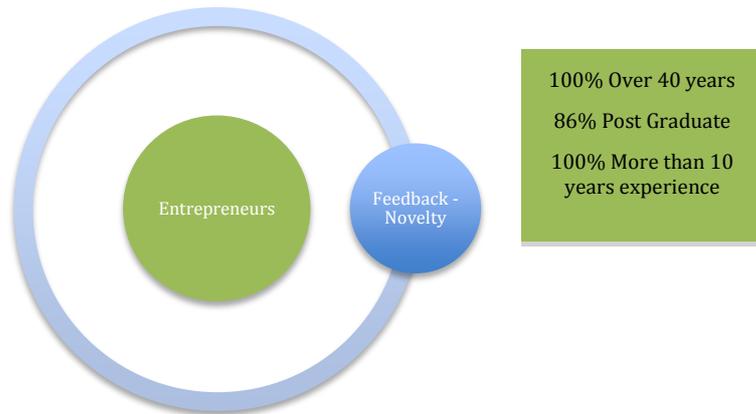


Figure 37: Entrepreneurs – Significant Deviation in Cluster 5

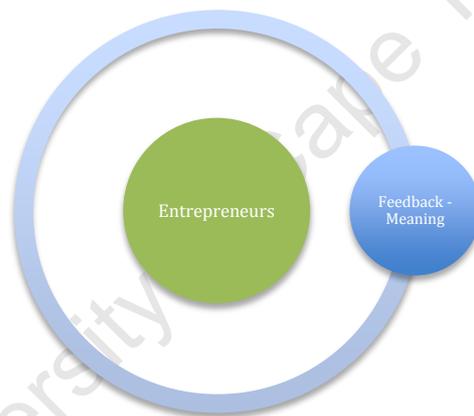
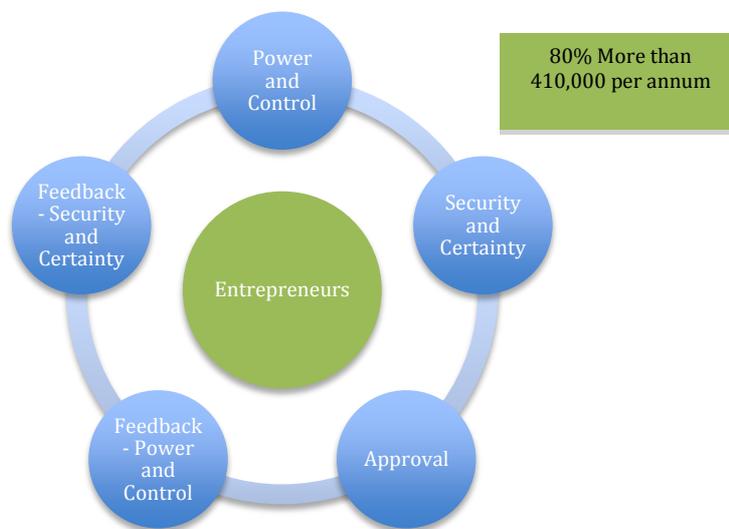


Figure 38: Entrepreneurs – Significant Deviation in Cluster 6



5.4.5. Clustering – Business Managers

Figure 39: Business Managers, 6 Clusters, Means

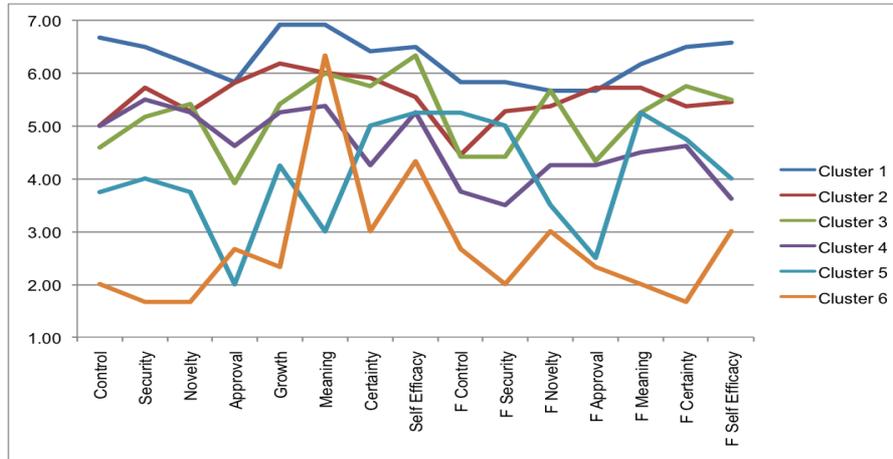


Figure 40: Business Managers, 6 Clusters, Proportions

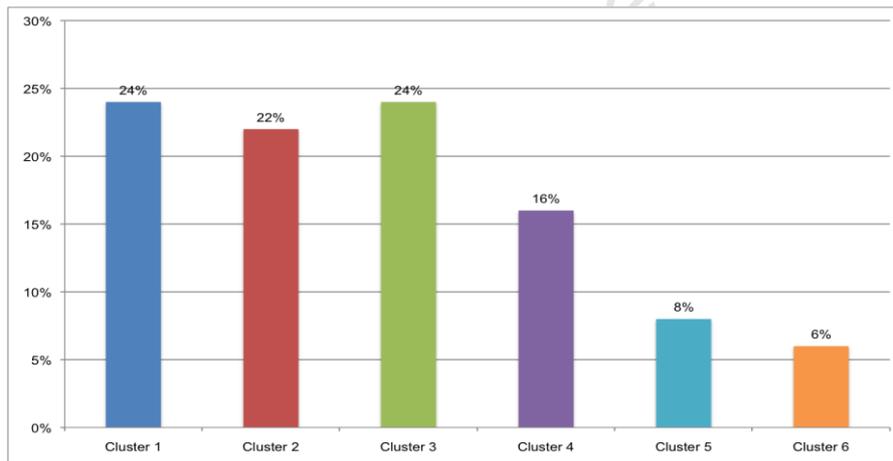


Figure 41: Business Managers, 6 Clusters, Variances from Sample Means

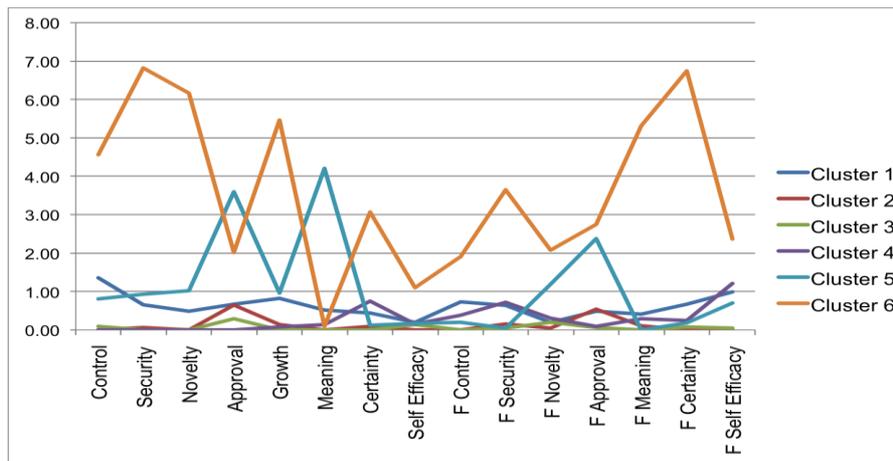


Figure 42. Business Managers – Significant Deviation in Cluster 1

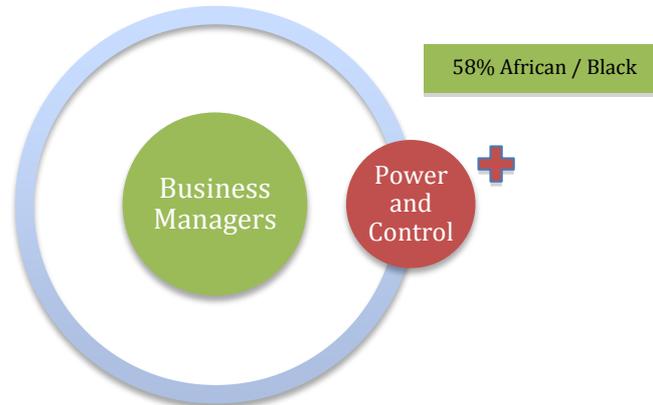


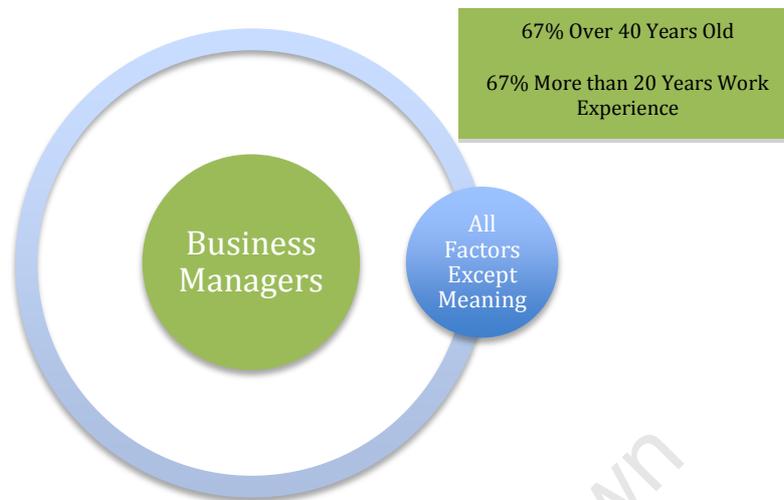
Figure 43. Business Managers – Significant Deviation in Cluster 4



Figure 44. Business Managers – Significant Deviation in Cluster 5



Figure 45. Business Managers – Significant Deviation in Cluster 6



5.5. Analysis and Discussion

The means of responses to motivation questions in the fieldwork show only small variations from one career type to another. This finding does not offer much information about possible differences in the motivations of respondents with different career orientations. Unsupervised artificial neural network clustering however shows that clusters representing between 24% and 54% of each career group have outlying patterns in responses that vary substantially from each sample mean. The outliers identified by the ANN process are indicators of areas of potential interest in the motivational systems of workers. Rather than seeking to build a representation of the motivations of an entire group they add value by drawing attention to motivational factors that lie outside of the mean and combinations of values that may offer insight into patterns of motivation. Fully understanding the meanings of these patterns requires additional research. This is undertaken in the second part of the fieldwork by using focus groups of professionals from each career orientation to interpret the meanings of outlying patterns.

Linear methods of analysing information are useful when seeking to deconstruct and influence simple systems. Human behavioural systems however have proven themselves resilient to linear forms of analysis because they are dynamic and complex and because they exhibit emergent properties, diverse behaviours and unexpected patterns in relationship. Artificial neural networks represent an alternative analytical paradigm that allows for the

analysis of complexity of human behaviour and motivation in an organizational context. The benefit of such an approach lies in its capacity to more realistically reflect the diversities of the “real world” in which businesses operate.

The value of the non-linear ANN clustering process lies in its capacity to draw from a diverse range of motivational variables in visualizing dynamics of a motivational system and to represent potentially useful outlying relationships between those variables. Say for example, one were the dean of a college focused on the creative arts that was experiencing an unusually high rate of drop out among students and so wished to better understand how to motivate remaining students to stay focused on their studies. A classical approach would be to apply a linear model of motivation to interrogating possible problems in motivation among the students. Such a process may not succeed for two reasons:

- a) The model may exclude variables of motivation one has not considered to be relevant but which may be key factors in the motivational systems of students dropping out.
- b) The model, by focusing on average responses of students, may fail to highlight the unique dynamics of those particular students in danger of dropping out.

The benefits of using a non-linear conceptual model of motivation under such circumstances are that:

- a) The model would not rely on preconceptions of influencers of student’s motivation but would use student data itself to highlight potentially unexpected factors of interest.
- b) The model may draw out the particular feelings of “at risk” groups and enable the identification of high leverage interventions for dealing with those groups.

Similarly, a non-linear model of motivation applied in a business setting would not begin with the unlikely assumption that one’s workforce was homogenous and driven by common values. Rather it would better reflect the diverse reality of individual values and motivators.

Academic models of human behaviour founded on linear reductionist principles generally seek to minimize complexity and encounter difficulty when faced with the complex reality of organizational life. Academia is often criticized by mainstream business for its focus on abstraction and resulting conceptual models that are impractical for application in real world circumstances. Clustering through artificial neural network analysis puts a tool in the hands of business managers and strategists that can aid in a more realistic interpretation of complex real world data. Such a tool draws attention to factors that, in a dynamic system, may have a strong effect on the system while not being easily observable in reductionist terms. Rather than approaching motivation in an organization from a perspective of an idealized, simplified model, seeking to impose preconceived ideas about how behaviour “should” function the researcher can allow the reality of motivation on the ground to influence their image of the nature of a motivational system and so have better likelihood of intervening successfully in that system.

Ultimately the first part of the fieldwork has shown, as a proof of concept, that ANN clustering can be used in a context of work motivation to identify patterns in motivations of particular groups of people that may otherwise be lost when analysing motivational data through reductionist means. This process could be used practically by managers and HR specialists wishing to understand the motivations of workers in a particular context or the efficacy of a particular intervention. A complete analysis of the meanings and implications of the outlying motivational variables is given in the results section of the second part of the fieldwork.

5.6. Limitations

a) Bias in self-reporting measures

Respondents were asked to subjectively evaluate the influence of motivating factors upon them. There are considerable limitations with self-reported measures in psychological studies. Primary among them are the differing interpretations respondents can attribute to questions as well as differences in approaches to self-analysis. The limitations of self-reporting measures are a common concern for psychology researchers however the difficulty of applying objective measures of analysis to studies of complex psychological phenomena are prohibitive for practical reasons. Scanning techniques like MRI's offer the possibility for more objective measures of psychological variables but are limited in their

applicability in an organizational context. Studies using self-reporting measures have a broader range of potential application but carry with them inevitable limitations. This does not negate the value of self-reported measures that are commonly used in a wide variety of well accepted psychometric tests, however it does call for caution on the part of researcher in drawing conclusions from self reporting measures. Given that the fieldwork being performed in this case seeks to visualize motivational patterns using a non-reductionist approach and not to claim objective descriptions, the limitations of self-reporting measures are of somewhat lesser concern.

b) Questionnaire

The results of the study showed that most responses to questions ranged from the high end of “somewhat agree” to the low end of “strongly agree”. Responses fell in a very similar band independent of category of respondent. One reason for this could have been the manners in which questions were phrased and the Likert scale was defined. Results with greater variation may have been obtained by “forcing” respondents into a pattern of response that would result in greater variation. In other words the factor “Somewhat agree” may have encompassed too broad a range of feelings about a motivational factor, resulting in a majority of motivational factors being classified in this group. Asking respondents to rate their degree of agreement with the presence of a motivational factor on a scale where “ten” equals strongest possible agreement and “one” equals lowest possible level of agreement may, for instance, have resulted in greater variation among responses.

c) Choice of motivation variables

Definitive motivational variables have not been established within the psychological or neurological sciences. Motivational variables included in the model of human motivation used for this study are well supported by research evidence but are not exhaustive. Further studies, using different motivational variables or the same motivation variables characterized in different ways, may yield different results.

d) Sample sizes

Sample sizes were limited to one hundred respondents for each population group due to constraints in sampling resources. Small samples cannot be said to reflect a global population (Berg, 1989). With an artificial neural network clustering process, larger sample sizes may yield more meaningful results.

e) Self-Sampling Error

Samples were collected in Cape Town and were selected by one sampler. As such they cannot be said to reflect a random population group (Berg, 1989). To reduce the impact of this error, a larger sample size collected by multiple samplers in multiple locations would be needed. Also, population sub groups from which respondents were drawn were potentially biased by the sampler's personal demographics.

f) Neural network analysis as a 'black box'

A criticism sometimes levelled against neural networks is that they are a black box (Dewdney, 1997). In other words, they can be viewed in terms of their input and output but the process by which that output is arrived at is opaque to the observer and so, according to some critics, has questionable meaning. This is an inevitable consequence of a non-linear method of visualization like artificial neural networks but is justifiable in terms of the epistemological basis for this research.

Chapter 6

Field Work: Interrogation of Outlying Motivational Variables Using Focus Groups

University of Cape Town

Chapter 6

Field Work: Interrogation of Outlying Motivational Variables Using Focus Groups

Using the non-linear conceptual model of motivation defined in Chapter 4, artificial neural network clustering was used to identify outlying patterns in the motivations of individuals with different career orientations in Chapter 5. To add context to these findings, we need to obtain more information about their meaning. One means of achieving this is through the use of focus groups. Focus groups offer a method of exploring non-linear data given their reliance on qualitative data generated through group interaction to create meaning (Green et al, 2003).

In this second part of the fieldwork, focus groups were asked to interpret outlying responses from the first study as well as factors that compensate for those outlying patterns. For instance, if a group of respondents did not feel positive approval from friends, family or community while pursuing a goal, a focus group of individuals from a similar career orientation was asked why this might be the case, and what factors might compensate such individuals to stay motivated towards achieving their goal. These questions are in line with the conception of human motivation as a systemic property whereby a deficit in one part of the system may result in balancing compensation in a different part. Respondents were also asked to comment on their impressions of the relevance of demographic associations with certain patterns of motivation, when those associations were prominent.

6.1. Population and sample groups.

Four focus groups were conducted, one for each of the four career orientations identified in the first study. Each group consisted of seven subjects from one of the four career orientations – one group was composed of seven creative artists, another, seven

entrepreneurs, another, seven creative students and a final group of seven business managers. Participants in the focus groups were selected using a convenience-based approach resulting in non-probability based sample groups.

6.2. Focus Group Methodology

Subjects were invited to attend an hour-long session in which they would discuss their impressions of the findings of a study of work motivation of people with their career orientation. They were informed that their responses would remain anonymous. Each subject was asked to answer questions based on findings from the first study relating to their career group, focusing on their personal experiences in their answers. After discussing all questions, subjects were asked to comment on any issues they felt remained unclear or were omitted from the discussion. Conversations with subjects were facilitated with effort being taken to create an open, safe space in which discussion could unfold. Results from focus groups were recorded and transcribed for analysis.

Data was analysed qualitatively using a two-step process of thematic identification and data coding (Auerbach and Silverstein, 2003). Themes were identified in respondent's answers to questions primarily by looking for repetition themes by a majority of respondents. The resulting thematic framework was used to code the data and extract comments from respondents that supported themes. Results of the coding process are presented and discussed in Section 7.6. Full transcripts of focus groups numbered by line are presented in Appendix H. The questions that follow were based on the clustering outcomes.

6.3. Focus Group Results – Creative Students

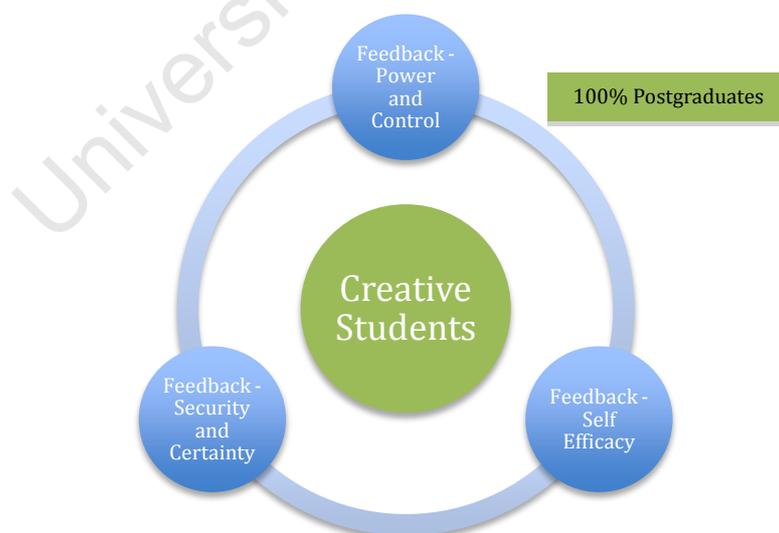
6.3.1. Focus Group Results – Creative Students

In the first section of the fieldwork, two clusters of creative students were identified as having motivational outliers – Clusters 1 and 2. First of all we take these clusters of motivational outliers and develop questions that relate to them and that can be asked to the focus groups to stimulate discussion on these points. These questions are:

- Why do you think this group feels this way?
- Why do you think they continue to pursue their goal despite feeling this way?
- Is there a reason why you think *insert relevant demographic* (for instance men) may feel this way?

The transcribed answers of focus group members to each question are detailed in Appendix F. These answers were reviewed using a process of thematic coding to identify common themes in responses.

Beginning then with Creative Students and Cluster 2 (because this is the most “interesting” cluster of outliers) we see the following outlying motivational variables:



Focus groups were asked questions relating to these outlying variables and their answers coded for common themes in responses as per Table 12 that follows.

Table 12. Creative Students Focus Group Results – Cluster 2

Why do some creative students disagree that they receive feedback while pursuing their goal that makes them feel secure or certain; powerful and in control or that they have the skills required to achieve their goal?	
A	They feel criticized and lacking in approval from others for their choice of work
B	They feel that limitations of the South African marketplace restrict their potential for success as creative artists.
C	They experience their creative process as very personal and emotionally charged, leading them to feel vulnerable.
Why do creative students continue to pursue their goals despite these feelings?	
A	They experience an intrinsic pleasure in the act of creation.
B	They feel an inner compulsion to be creative artists.
Is there a reason why postgraduate creative students may feel this?	
A	They have had professional experience as creative artists and not found positive feedback to their work.

We can see for instance that focus group respondents believed that some creative students may feel less secure, in control or capable than their peers because the kind of work a creative artist does may be subject to criticism, because the creative process can leave an artist feeling vulnerable and exposed and because the South African marketplace may not be a favourable environment for the work of creative artists. Compensating for these anxieties is the idea that creative students may feel an intrinsic pleasure in the act of creating and that there is an inner compulsion to be a creative artist. Lastly the fact that all of the creative students who expressed these feelings were postgraduate students was interpreted as meaning that they had been out into the workplace and found a lack of approval or opportunity in their work.

We now repeat this process for Cluster 1 of creative students - asking similar questions about why some creative students don't feel that achieving their goals will bring them a sense of variety or novelty. The focus group members interpret this as being because the

students felt anxiety about how they would be received in the job market. Again, they are thought to continue to pursue their goals despite these feelings because of the pleasure inherent in the act of creating and because of an inner compulsion they feel to perform their work.

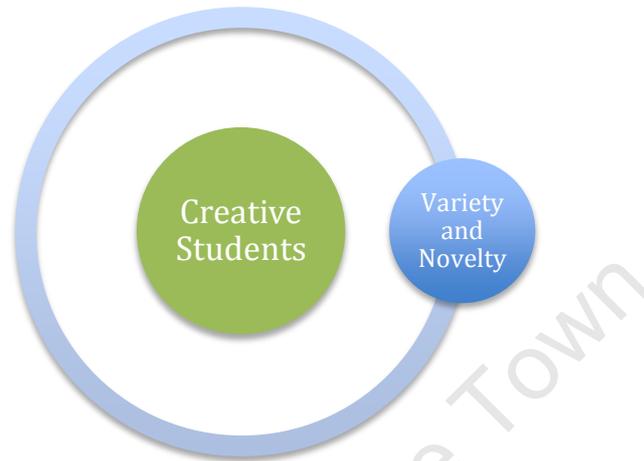


Table 13. Creative Students Focus Group Results – Cluster 1

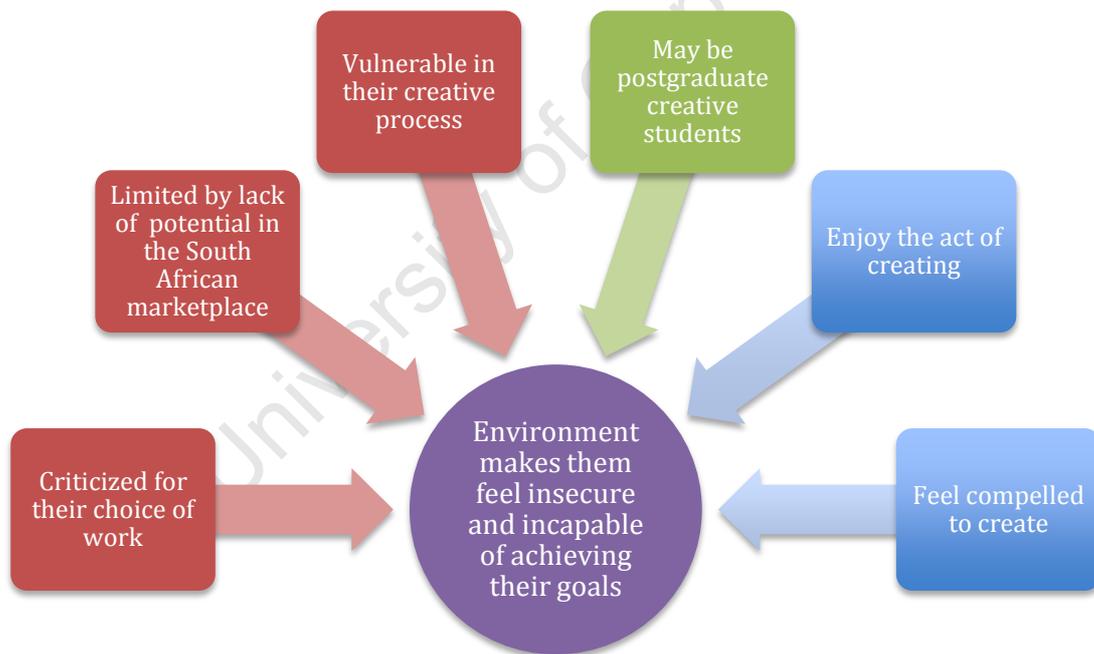
Question: Why do some creative students feel neutral about the novelty or variety that achieving their goal will bring to their lives?	
A	They feel anxiety about how they will be received in the job market once they graduate.
Question: Why do creative students continue to pursue their goals despite these feelings?	
A	They experience an intrinsic pleasure in the act of creation.
B	They feel an inner compulsion to be creative artists.

From these findings we gain a picture of some creative students as feeling quite anxious, lacking in security and control – and not particularly positive about what the job market will bring them. Possibly even disappointed about how their work has been received in the past. Yet we also see that they feel a deep sense of enjoyment in the actual act of their work and a compulsion driving them to perform it that perhaps helps to balance these feelings of insecurity.

6.3.2. Focus Group Analysis – Creative Students

The clustering process showed two groups of creative students with outlying motivational responses. A first group felt that they did not get feedback from their environment that made them feel secure, in control or capable of achieving their goals. Focus groups attributed this response to the fact that some creative students feel first of all vulnerable in their creative process – they are putting a lot of themselves on the line by being artists and creating new works. Secondly, being an artist can be quite alienating with one’s family or society at large criticizing one’s career choice or one’s work itself. Thirdly, the South African marketplace is not very supportive of artists. Balancing this negative feedback seems to be that creative students experience a great deal of pleasure in the act of creating itself – and feel compelled to create, that they have no other choice open to them because this is their nature.

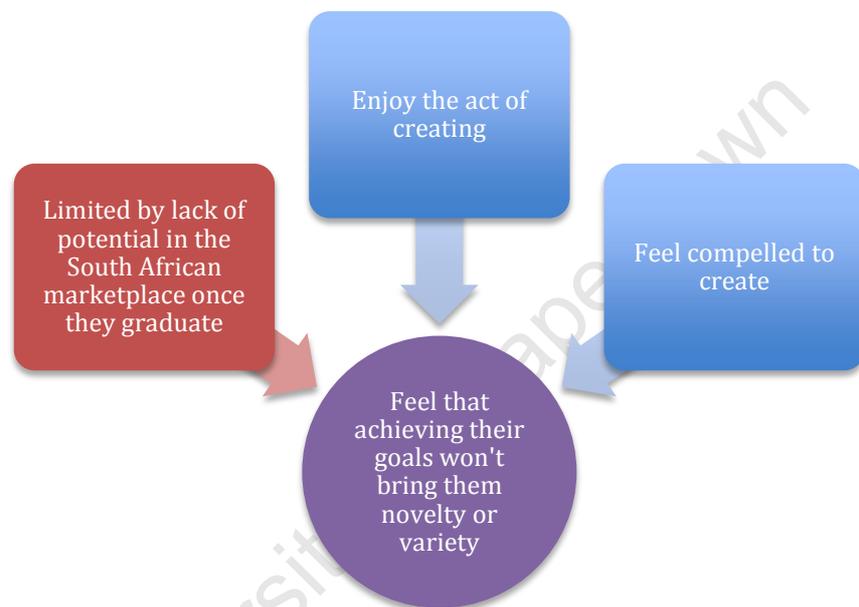
Figure 46. Creative Students Cluster 2 Outliers Summary



It was interesting that the group of creative students who felt this way were all postgraduate creative students. This points to the possibility that those students who had experienced the world outside of university as artists and had returned to university felt this kind of lack of support. In the next section discussing the outliers of professional creative artists we see a similar trend.

Moving on to a second cluster of outliers, we see that some creative students don't feel that achieving their goal would bring them greater novelty or variety. This was interpreted by the focus group as relating to an expectation that the South African market would not receive them well after they graduated – an expectation that, given the feelings of some postgraduate students and professional artists – seems to be justified. Again however, creative students continue to pursue their goals because of the intrinsic pleasure in the act of creating and a sense that no other path would satisfy them.

Figure 47. Creative Students Cluster 1 Outliers Summary



6.3.3. Focus Group Educational and Policy Implications – Creative Students

Having identified particular motivational influencers associated with creative students, it is useful to consider what implications these findings may have for educators or policy makers wishing to improve the motivation of these groups. The following table offers recommendations to educators or policy makers.

Creative Student Feeling	Educational / Policy Implications
Feel vulnerable in the creative process or criticized for their choice of work.	Educators can provide students with tools for dealing with feelings of insecurity that can accompany an artistic profession. These could include methods of self-affirmation for dealing with perceived criticism, or the cultivation of social support networks.
Feel vulnerable in the creative process or criticized for their choice of work	Educators and policy makers can take steps to influence the perception or reality that careers in the creative arts have lower utility than other career types – both in the eyes of the public and artists themselves.
Feel limited by a lack of potential in South African marketplace	Educators can equip creative students with the skills required to grow a personal creative passion into a sustainable and profitable enterprise. Mentorship from established creative artists who have made this transition could be valuable. Creative students must be equipped with the business skills that will enable them to successfully participate in the formal economy.
Postgraduate Students who feel criticized for their work or limited by a lack of potential in the marketplace.	Educators can pay special attention to postgraduate students who may require greater support in terms of business management skills or self-affirmation technique than undergraduates.

6.4. Focus Group Results – Professional Creative Artists

6.4.1. Focus Group Results – Professional Creative Artists

Three clusters of professional creative artists were identified as having outlying motivational variables. Beginning with Cluster 1 we see a similar pattern to that of Cluster 2 of creative students: a lack of environmental feedback that would lead them to feel secure or in control. Added to this is the factor of lack of social approval.



Table 14. Professional Creative Artists Focus Group Results – Cluster 1

Question: Why do some creative artists disagree that they receive feedback while pursuing their goals that makes them feel secure or certain; powerful or in control or approved of by their friends, family or community?	
A	They feel exposed to the criticism of society, their families or their employers for their choice of career or their creative output.
B	They feel anxiety about their finances.
Why do creative artists continue to pursue their goals despite these obstacles?	
A	They enjoy the positive regard that their creative output brings them.
B	They feel pleasure in the act of creation.
C	They feel that a career of creative self-expression is the only path available to them.

Again, like creative students, some professional creative artists seem to feel insecure because of criticism for their choice of work or their creative output itself. Added to this is anxiety they may feel because of financial insecurity. Also like creative students, professional artists may continue to pursue their goals because they feel pleasure in the act of creating and feel compelled to be artists. Interesting to note is also that while criticism for their work seems to be a de-motivator, approval for their work is a strong motivating factor.

Moving on to Cluster 2, we see a group that also feels a lack of security but in addition feels a lack of environmental support that would make them feel that they have the abilities required to achieve their goals. This was attributed by the focus group to the possibility that, since the group was largely composed of men, they might feel a particular form of criticism society reserves for males who don't adhere to socially designated roles.

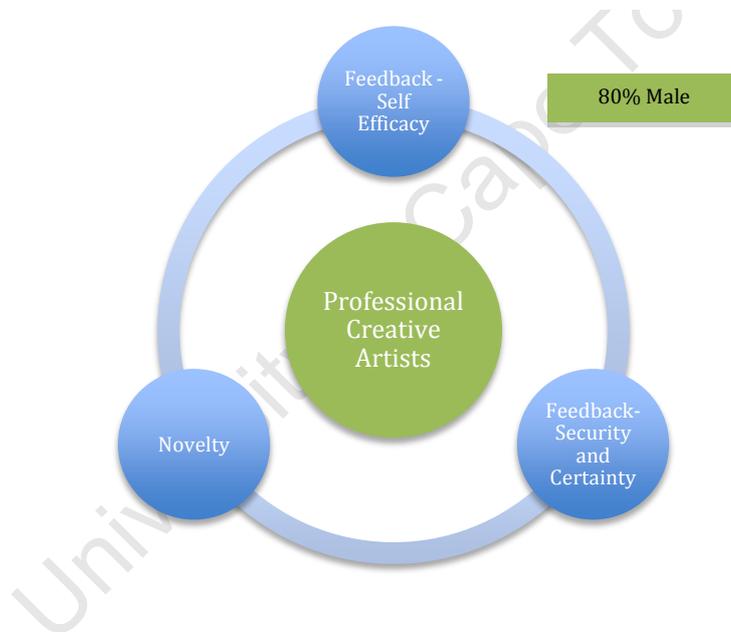


Table 15. Professional Creative Artists Focus Group Results – Cluster 2

Why do some creative artists somewhat disagree that they have the abilities required to achieve their goals or that they will achieve them?	
A	They feel a lack of social support.
Is there a reason a large proportion of creative artists who feel less confident about their abilities or likelihood of achieving their goal are male?	
A	Male creative artists may feel that socially designated roles require them to be controlling and perceived as competent in a manner that is at odds with a creative career.

Cluster 3 had a high proportion of older, more experienced creative artists. This group again felt the lack of security or control in feedback from their environment – but also didn't feel that achieving their goal would bring them security or control.



The focus group interpreted this finding as resulting from the possibility that older more experienced creative artists may have, at one point, felt that if they achieved their goal their sense of lack of security or control in their work may be diminished but that, with that experience they in fact found that it remained.

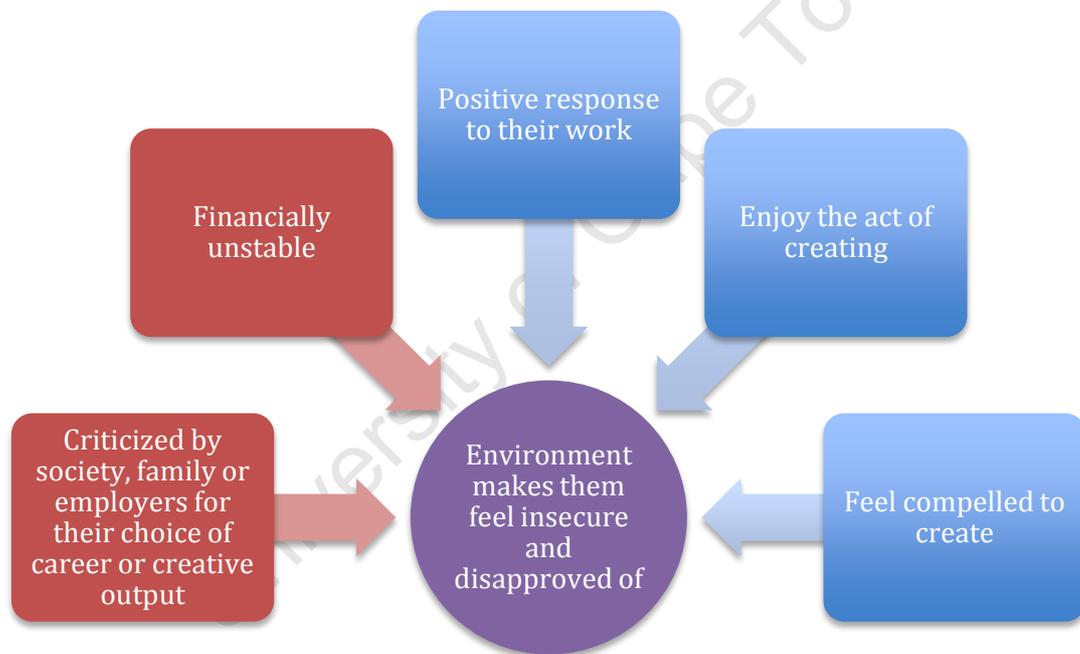
Table 16. Professional Creative Artists Focus Group Results – Cluster 3

Why do some older, more experienced creative artists disagree both that they are made to feel secure and certain or powerful and in control by their environments as well as disagreeing that achieving their goal will bring them these qualities?	
A	They feel that the ideals of their youth are not achievable.
Why do creative artists continue to pursue their goals despite these obstacles?	
A	They enjoy the positive regard that their creative output brings them.
B	They feel pleasure in the act of creation.
C	They feel that a career of creative self-expression is the only path available to them.

6.4.2. Focus Group Analysis – Professional Creative Artists

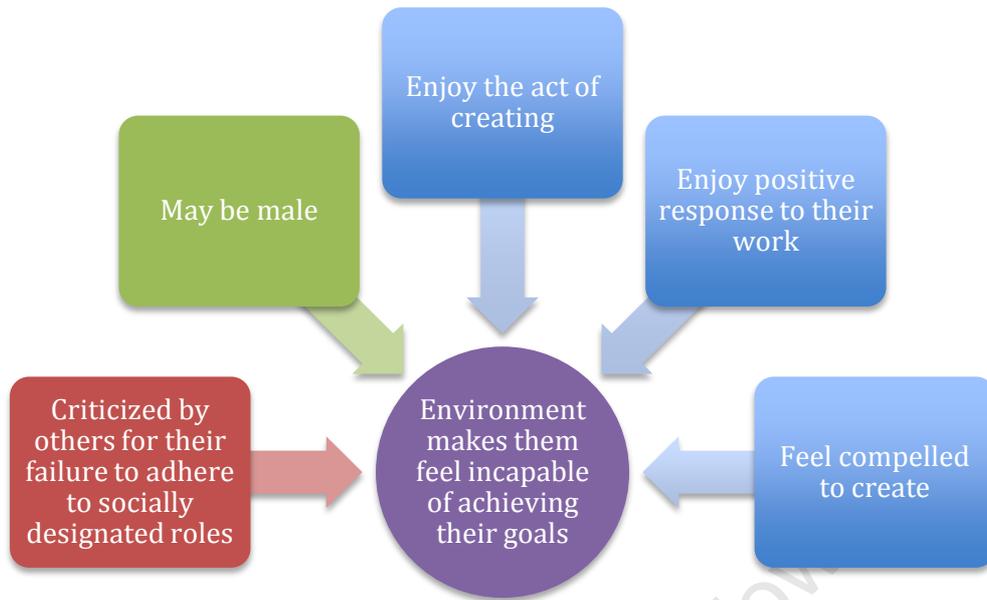
A first cluster of professional creative artists described that they felt a lack of security and approval in their environment. Focus groups interpreted these feelings as resulting from a lack of financial stability and the fact that creative artists sometimes draw criticism from their family or society as a whole for their choice of work, or perhaps for the output they produce. Like creative students the balancing factors for these feelings were interpreted as being an intrinsic enjoyment experienced in the act of creating as well as a feeling of compulsion to create. Unlike the outlying group of creative students, professional artists identified a third motivating factor of positive response to their work.

Figure 48. Professional Creative Artists Cluster 1 Outliers Summary



A second cluster of professional artists indicated that they feel a lack of support from their environment that would make them feel capable of achieving their goals. A large proportion of these artists were men and the focus group interpreted these feelings as relating to a particular criticism that men might receive for failing to stick to a socially defined rule of the man as provider engaged in “proper work”.

Figure 49. Professional Creative Artists Cluster 1 Outliers Summary



A final group of creative students felt that their environments did not provide them with a sense of security or control but also that achieving their goals would not bring them greater security or control. Many of these artists were older and more experienced in their work.

Figure 50. Professional Creative Artists Cluster 1 Outliers Summary



This presents the possibility of an interesting pattern of managing insecurity in creative artists. Younger creative students don't seem to feel the sense of lack of security or control that a postgraduate group does. However the postgraduate group's feelings are mirrored by a group of professional creative artists. Lastly, a group of older more experienced professional artists still feels this lack of security and control but seem to no longer feel that achieving their goal will bring them these qualities. This suggests the possibility of a relationship between experience as a creative artist and a willingness to confront an inevitable sense of limited security or control as an artist. Consistent throughout these groups however seems to be the sense that intrinsic enjoyment in the act of creating and a feeling of compulsion to be artists overrides the lack of security that is a strong motivational value.

6.4.3. Focus Group Educational and Policy Implications – Professional Creative Artists

Feeling or Group	Educational / Policy Implications
Feel financially unstable.	Educators can make creative students aware of the potential financial risks associated with a career as an artist. They could then help to equip artists with the tools they need to deal with this reality.
Feel financially unstable.	Policy makers wishing to provide support for the creative arts could create organizations tasked with forging a better link between artists and the formal business community.
Feel criticized for their choice of career or creative output.	Creative artists could be taught skills to combat the social alienation or criticism they may face. Support networks can be a great help in this regard as can psychological tools that help one to be self-affirming and to counter external criticism.
Feel criticized for their choice of career or creative output.	In general, educators and policy makers could help to promote the value of the creative arts as a valid career choice to the public and show how creative artists benefit a society as a whole. This could help to educate a potentially critical public about the value of the arts and so diminish negative feedback experienced by artists.

<p>Male creative artists who feel judged by society for their choice of career.</p>	<p>Educators and policy makers may wish to provide special attention to male creative artists who experience a particular form of social pressure because of the combination of their gender and career choices. Again, the best way to combat this kind of pressure would be to find ways of influencing public perception about the value of the creative arts to society as well as the out dated notion of certain career types being associate with certain genders.</p>
<p>Older creative artists who no longer feel that their ideals are achievable.</p>	<p>The fact that an older, more experienced group of creative artists feel that achieving their goals will not bring them greater power or security may be a de-motivating factor or simply a reality that these experienced professionals have learned to live with. This may point to de-motivated older professionals whose skills could be useful to a community. A group of older, experienced professionals who feel de-motivated by several factors is a common theme across each career group however – possibly pointing to a theme that relates more to stage of career than career type.</p>

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6.5. Focus Group Results – Entrepreneurs

6.5.1. Focus Group Results – Professional Creative Artists

The focus group of entrepreneurs suggested in response to the outlying variable of Cluster 4, that some older more experienced entrepreneurs feel a lack of novelty or variety in their work because much of what an entrepreneur must do, can, in time, become repetitive. In general it was felt that entrepreneurs continue to pursue their goal despite obstacles either because they have strong visions that they believe are achievable or out of sheer necessity as a matter of survival.

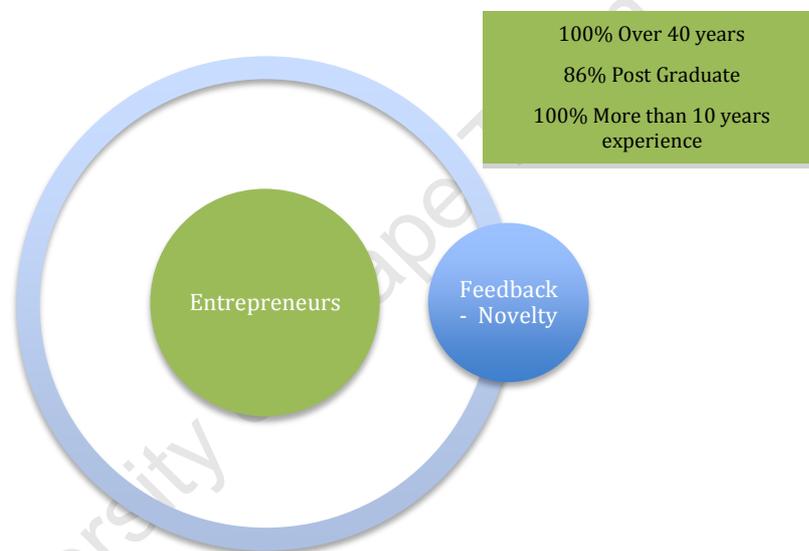
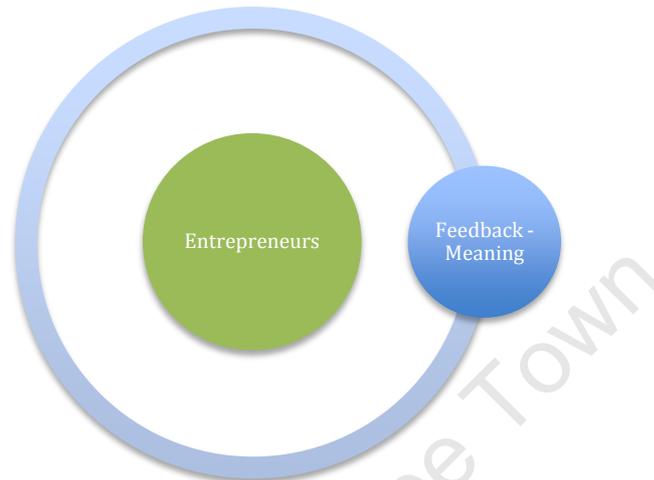


Table 17. Entrepreneurs Focus Group Results – Cluster 4

Why do some older, highly qualified entrepreneurs feel neutral about the feedback of novelty and variety they receive while pursuing their goal?	
A	Some older entrepreneurs may feel their work is repetitive.
Why do entrepreneurs continue to pursue their goals?	
A	Survival or necessity
B	They have a strong vision or feel a sense of inspiration they desire to see fulfilled.
C	They have a belief their visions are achievable

Another group of entrepreneurs felt little sense of personal meaning while pursuing their goals – unusual given that a sense of meaning was one of the consistently highest rated variables by most respondents.



Again it was felt that this may be because the day-to-day administrative tasks required to run a business are not always enjoyable to entrepreneurs – who perform them mainly because of their vision for their final goal.

Table 18. Entrepreneurs Focus Group Results – Cluster 5

Why do some entrepreneurs disagree that they receive feedback while pursuing their goals that makes them feel their work has significant personal meaning?	
A	Entrepreneurs may not enjoy performing the day-to-day administrative tasks required to achieve their goals.
Why do entrepreneurs continue to pursue their goals?	
A	Survival or necessity
B	They have a strong vision or feel a sense of inspiration they desire to see fulfilled.
C	They have a belief their visions are achievable

Lastly, Cluster 6 shows a group of mainly high-earning entrepreneurs who don't feel positive about the security, control or approval achieving their goals will bring them. The focus group suggested that this may be a result of having reached a "ceiling" to their achievements – unable to progress beyond it.

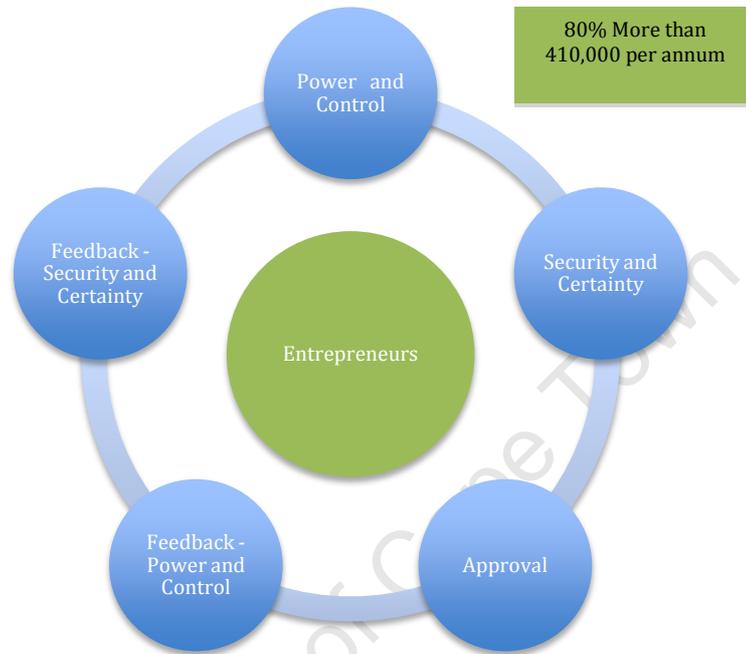


Table 19. Entrepreneurs Focus Group Results – Cluster 6

Why do some entrepreneurs disagree that achieving their goal will bring them power and control; security and certainty or the approval of their friends, family or community as well as disagreeing that they receive feedback that makes them feel secure and certain or powerful and in control while pursuing their goal?	
A	They have reached a ceiling to what they can achieve.
Why do entrepreneurs continue to pursue their goals?	
A	Survival or necessity
B	They have a strong vision or feel a sense of inspiration they desire to see fulfilled.
C	They have a belief their visions are achievable

6.5.2. Focus Group Analysis – Entrepreneurs

It was surprising to note that two groups of entrepreneurs didn't feel a sense of novelty or variety or alternatively a sense of meaning while pursuing their goals. Conventional wisdom suggests that entrepreneurs would feel such factors strongly given the nature of their work. However the fact that the day to day processes required to run a business can become tedious or distract from more interesting vision fuelled pursuits can explain this.

Figure 51. Entrepreneurs Cluster 4 Outliers Summary

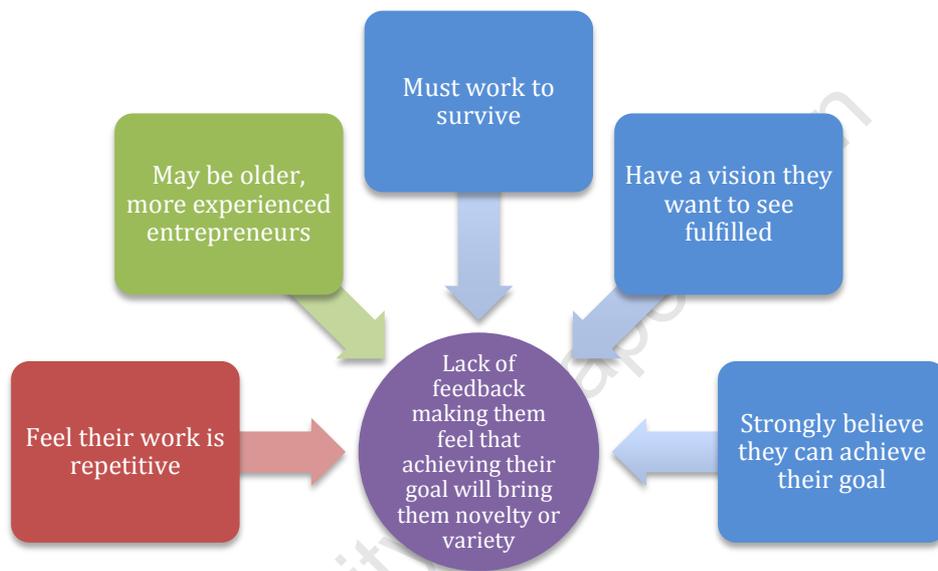
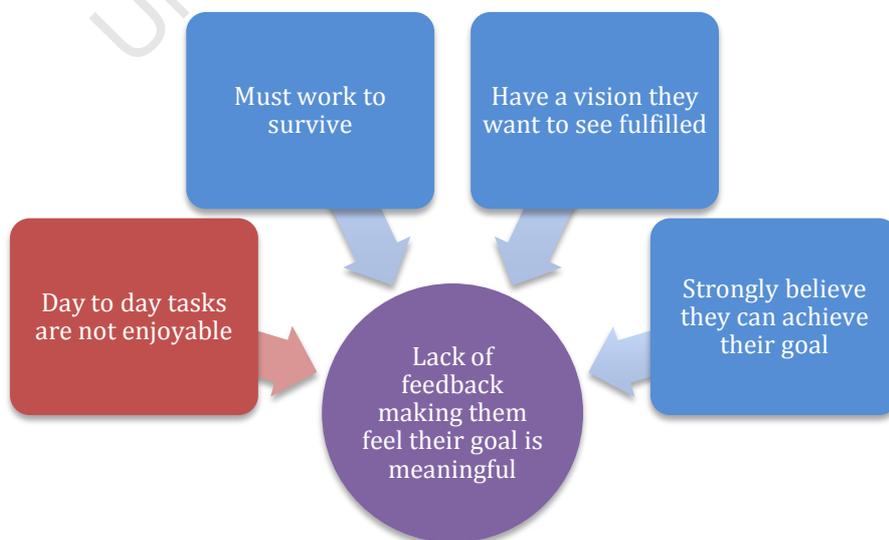
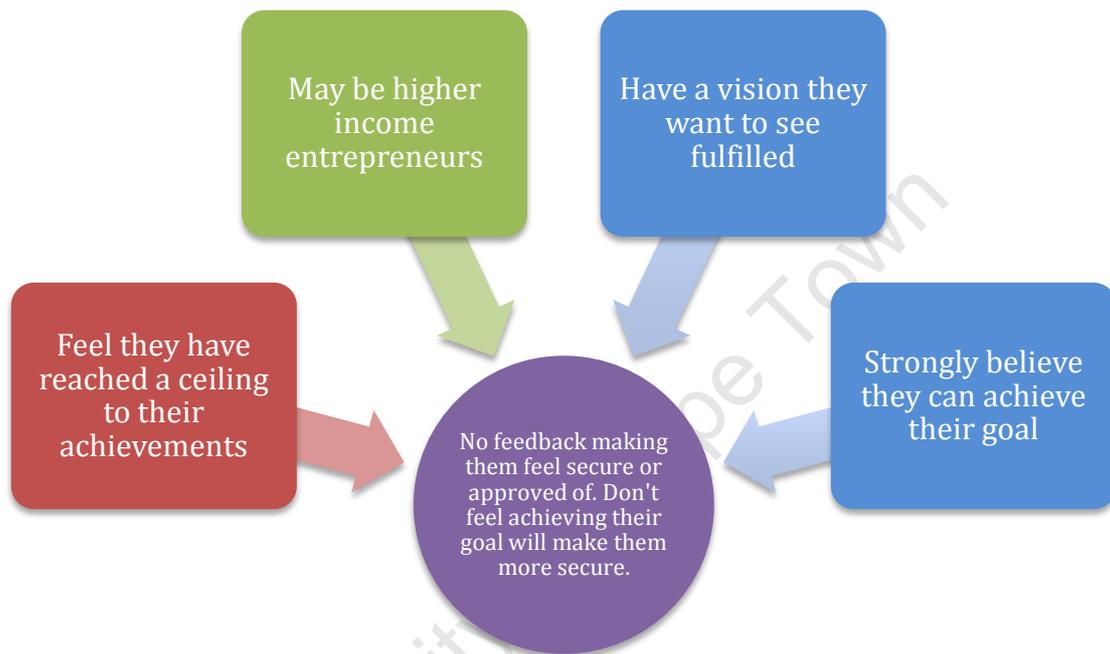


Figure 52. Entrepreneurs Cluster 5 Outliers Summary



The findings of Cluster 6 suggest that high achieving entrepreneurs may find themselves de-motivated because they have reached a ceiling to their achievements. Motivating this group may require the establishment of new goals that can re-ignite a sense of challenge within them.

Figure 53. Entrepreneurs Cluster 6 Outliers Summary



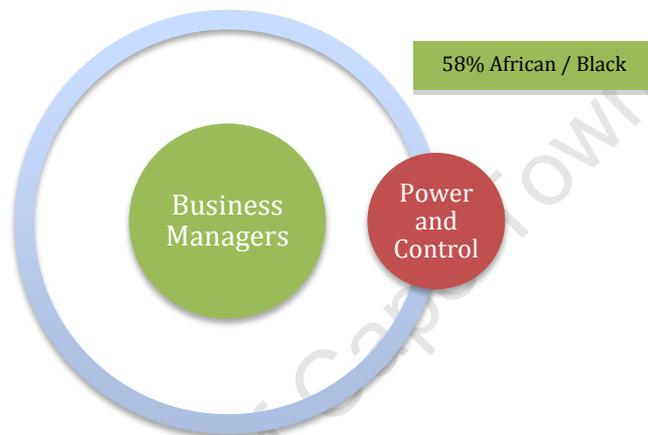
6.5.3. Focus Group Educational and Policy Implications – Entrepreneurs

Feeling	Educational / Policy Implications
<p>Feel that their work is repetitive or the day to day tasks required to run their business are not enjoyable.</p>	<p>Educators may wish to teach entrepreneurs how to set up their organizations in ways that minimize their need to engage in tasks they don't find fulfilling or meaningful. This could free up their creative energy to focus on tasks they may find more meaningful – like finding creative ways of growing their businesses or innovating into new areas of business opportunity. It may be useful to offer case studies of entrepreneurs who, having founded a successful business and felt trapped by repetitive or meaningless work, were able to chart a course into an area of activity that was more rewarding for them. Entrepreneurs, who often begin with a vision of creating a business may need to learn skills that pertain to how to actually run their businesses in ways that don't leave them in a position of needing to continually participate in less stimulating day to day activities.</p>
<p>Feel that their work is repetitive or the day to day tasks required to run their business are not enjoyable.</p>	<p>Policy makers in a country like South Africa that is heavily reliant on entrepreneurial activity to grow the economy should be aware of the potential for a segment of entrepreneurs who have established and are running their own businesses to become de-motivated due to the daily grind of running those businesses or the feeling of having reached a ceiling to their growth. The entrepreneurial capacity of these individuals could be liberated by teaching entrepreneurs the skills required to structure their businesses in ways that free up their energies to pursue entrepreneurial activities that feel more meaningful or novel to them.</p>
<p>Successful entrepreneurs who feel that they have reached a ceiling to their achievements.</p>	<p>These entrepreneurs are potentially the most valuable group to society, having proven their ability to build successful businesses. Entrepreneurs could be taught the importance of renewing their visions in their work and finding new mountains to climb.</p>

6.6. Focus Group Results – Business Managers

6.6.1. Focus Group Results – Business Managers

Cluster 1 of business managers was the only group to show a variation of stronger agreement with the presence of a factor. Focus groups interpreted this finding as reflecting that some business managers may feel strongly that their achievements will bring great recognition from their corporate environment. The down side of this feeling is that business managers may sacrifice personal connections in pursuit of their work goals.



The focus group interpreted the finding that a high proportion of these managers were Black / African by suggesting that such managers may have a false perception of what will come from achieving their goals – and perhaps have a strong need to seek more power or control due to a history of disenfranchisement. South Africa's political history, characterised by segregation and separate development, saw most Black / African South Africans denied the opportunity to participate in the primary economy of the country. The end of apartheid in the 1990's ushered in many new opportunities for these South Africans to enter the workforce. Policies of affirmative action and black economic empowerment specifically targeted at increasing Black / African people's involvement in business at a management level in South Africa has led to a unique set of circumstances in which such South Africans, previously denied all opportunity for involvement in business at a senior level, have access to the possibility of advancement to management. This may create a unique set of motivational circumstances for some Black / African managers.

Table 20. Business Managers Focus Group Results – Cluster 1

Why do some business managers strongly agree that achieving their goal will bring them more power or control?	
A	Some business managers may feel that achieving their goal will bring them recognition from the corporate environment and in particular their managers, leading to rewards like greater freedom, security, income or self-esteem.
What do some business managers sacrifice for this feeling?	
A	Some business managers may sacrifice their family life and social connections
Is there a reason why a high proportion of business managers who feel that achieving their goal will bring them greater power or control may be Black / African?	
A	Black / African business managers may have a misperception of what power or control will bring them.
B	A past of being denied power or control may lead Black / African business managers to seek greater power or control.

Cluster 4 of business managers felt a lack of feedback from their environment making them feel capable of achieving their goals. This was interpreted by the focus group as relating to the poor affirmation skills of their managers. Also that, in general, business managers continue to pursue their goals because of the money it offers and their sense that they have no other choice open to them.



Table 21. Business Managers Focus Group Results – Cluster 4

Why do some business managers feel neutral about the feedback they receive indicating they have the abilities required to achieve their goal?	
A	Some business managers may feel that their managers lack the skill required for affirming people's abilities.
Why do business managers continue pursuing their goals despite these obstacles?	
A	Money
B	Lack of alternative

Cluster 5 of business managers felt lacking in approval or novelty while pursuing their goals and didn't feel that achieving them would bring them novelty or be meaningful to them. Focus groups attributed these feelings as disconnection from their communities, a lack of space for self-expression or an objection to the goals of their businesses.

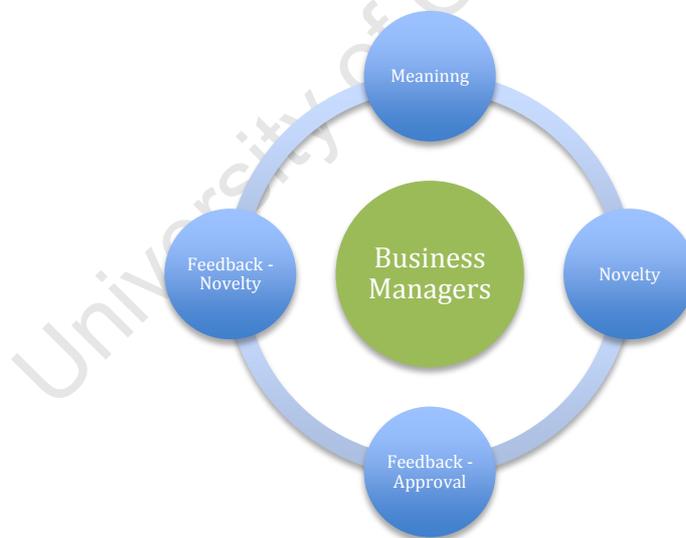
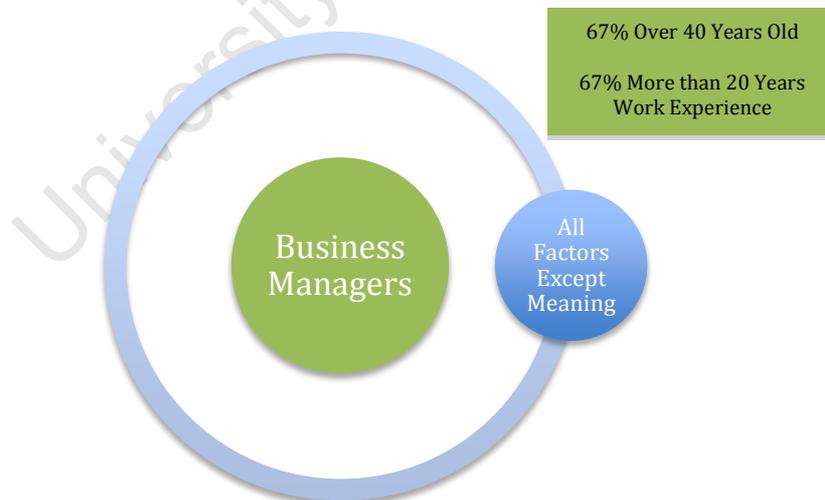


Table 22. Business Managers Focus Group Results – Cluster 5

Why do some business managers disagree that they receive feedback indicating their work has personal meaning, feedback of novelty or variety or feedback of approval from friends, family or community while pursuing their goals?	
A	Some business managers may feel disconnected from co-workers or their communities.
B	Some business managers may feel a lack of freedom to express themselves creatively.
C	Some business managers may feel an objection to the goals of their workplace
Why do business managers continue pursuing their goals despite these obstacles?	
A	Money
B	Lack of alternative

Finally, Cluster 6 of business managers was the strongest outlying group in the entire study. This group felt extremely negative about all factors except for the meaning that achieving their goal had for them. The cluster consisted of an unusually high proportion of older, more experienced business managers.



Focus groups interpreted these feelings as resulting from a sense of disillusionment with or betrayal by their companies or alternatively purely a sense of boredom with their work.

Table 23. Business Managers Focus Group Results – Cluster 6

Question: Why do some older business managers feel so negative about so much?	
A	Some older, more experienced business managers may feel a sense of disillusionment in or betrayal by their companies.
B	Some older, more experienced business managers may feel a sense of boredom due to the repetitive nature of their work.
Why do business managers continue pursuing their goals despite these obstacles?	
A	Money
B	Lack of alternative

6.6.2. Focus Group Analysis – Business Managers

The ideas that some Black / African business managers believe that their goals will bring them more power or control, that they may be driven in this direction by a history of disenfranchisement and that they may be mistaken in this belief are interesting. However to verify this interpretation it would be necessary to conduct a focus group primarily composed of Black / African business managers who may give a differing interpretation.

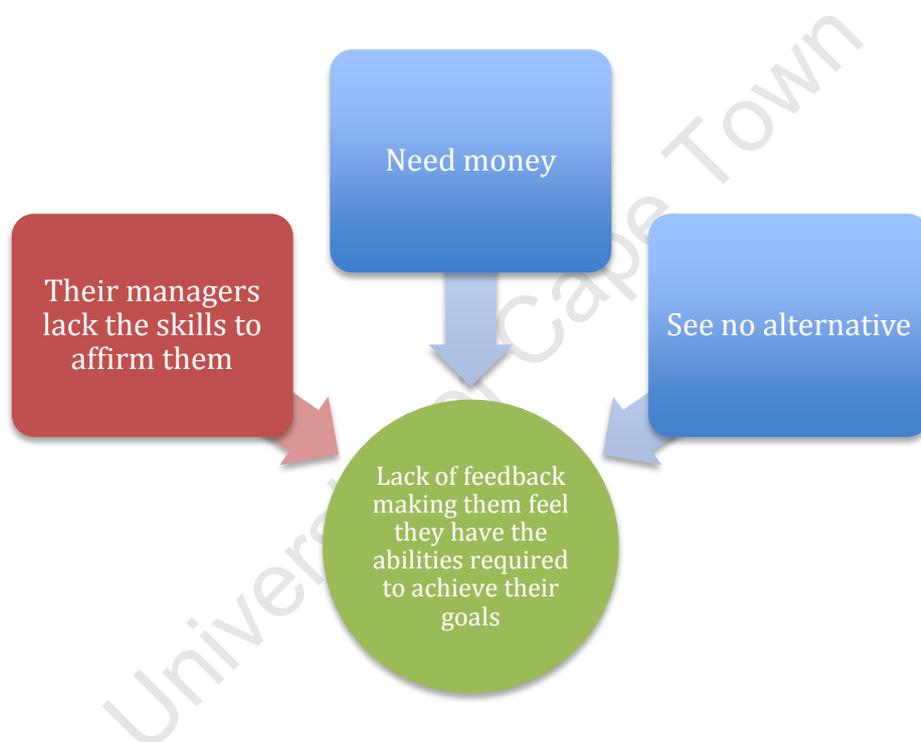
Figure 54. Business Managers Cluster 1 Outliers Summary



If shown to be accurate, this finding may suggest that effort should be made to address historical feelings of disenfranchisement among some Black / African business professionals and to possibly balance expectations of reward with reality.

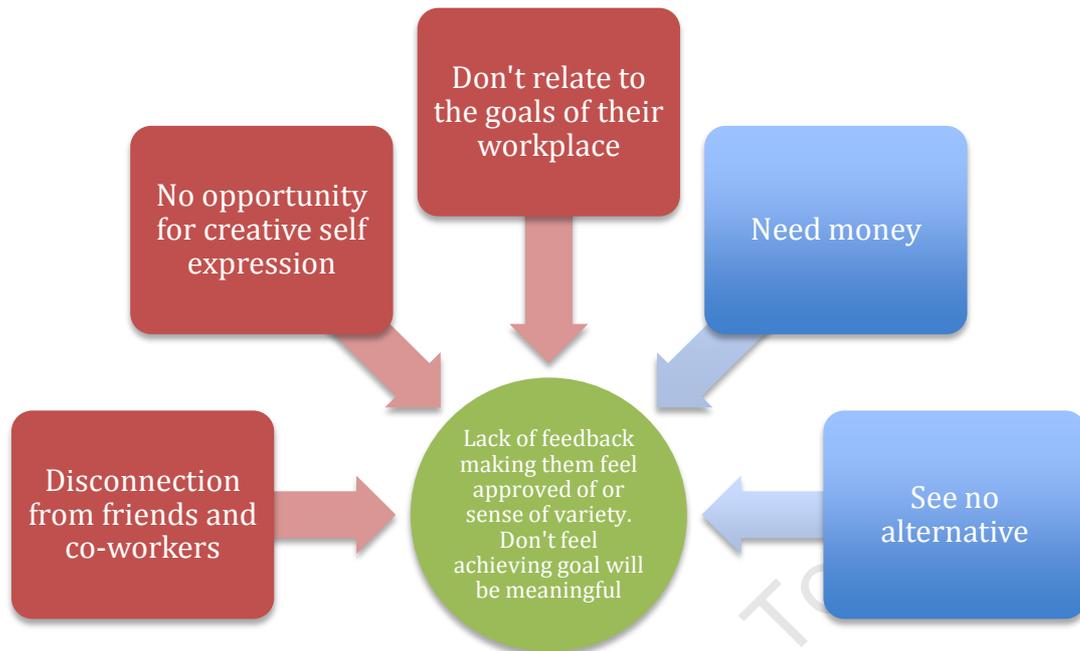
Looking at those business managers who feel a lack of feedback of self-efficacy, it appears that to improve their motivation may require improving the interpersonal skills of their manager.

Figure 55. Business Managers Cluster 4 Outliers Summary



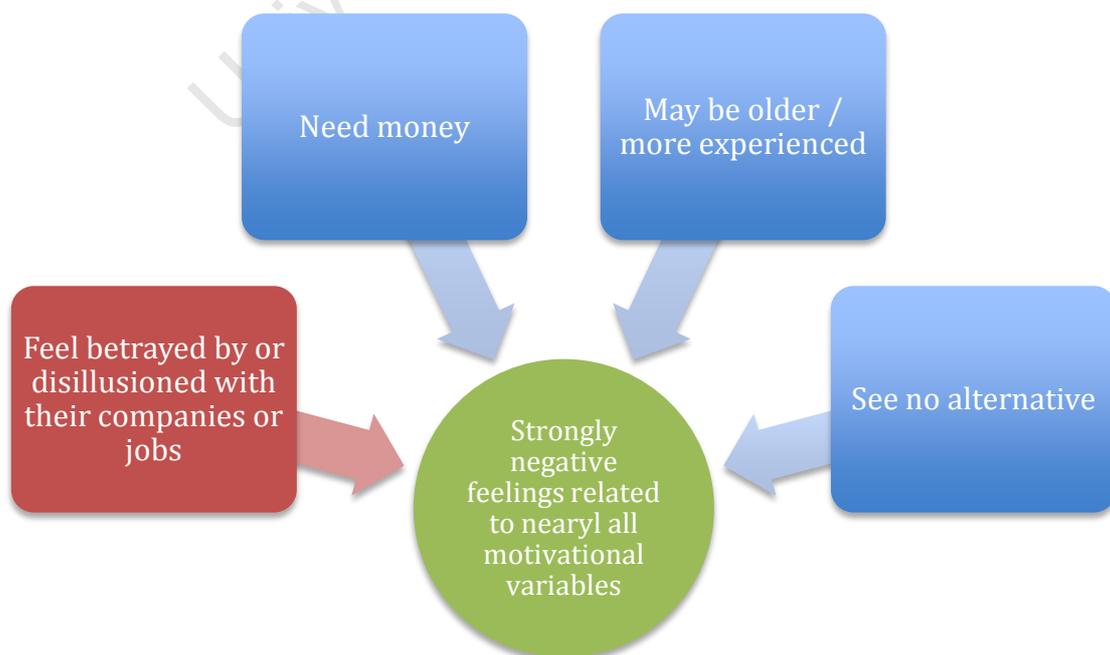
The group of business managers lacking feedback of approval or variety or a sense that their goals will be meaningful raised a number of common complaints of employees in the business world – improving the motivation of this group would require more freedom for creativity, more ownership of or involvement in the setting of business goals and more time or opportunity to connect with friends and co-workers.

Figure 56. Business Managers Cluster 5 Outliers Summary



Lastly, improving the motivations of the extremely negative group of older more experienced business managers does not look like a “quick fix”. A sense of betrayal or disillusionment may be built up over a long period of time and so this finding points more to the need to find ways of preventing such disillusionment or sense of betrayal from early on in a career.

Figure 57. Business Managers Cluster 6 Outliers Summary



6.6.3. Focus Group Educational and Policy Implications – Business Managers

Feeling	Educational / Policy Implications
<p>Feel that achieving their goal will bring greater power or control. May be Black / African managers.</p>	<p>The fact that a group of business managers feels unusually strongly that they will gain power from achieving their goal could point to a misperception of what achieving that goal will mean and / or an over emphasis on achievement in the business domain as a route to success. Business managers could be educated about the possible loss of connection to family or their community that might accompany pursuit of power in business.</p>
<p>Do not feel affirmed by their managers</p>	<p>This may point to a need for improving the interpersonal and leadership skills of these managers – providing them with the tools needed to successfully help their subordinates to feel competent.</p>
<p>Feel alienated from their communities, disconnected from the goals of their organization and lacking in opportunity for creative self-expression.</p>	<p>This combination of feelings is well discussed in literature and often associated with a career in an economic system characterised by division of labour. Business managers lacking such fundamental human needs will likely be very de-motivated. Policy makers wishing to address these feelings would need to take multiple steps. Firstly, the goals of the business must be re-examined and opportunity made for managers to participate in goal setting so that they feel personally aligned to those goals. Secondly, more focus must be given to individual skills, valences and desires of managers in assigned work responsibility to ensure that managers feel that they have the opportunity to express themselves creatively in their work. Thirdly, business managers must be encouraged to reconnect with their families and communities in meaningful ways rather than simply being the “workhorses” of their communities.</p>
<p>Older, experienced business managers who feel disillusioned and betrayed by their organizations.</p>	<p>These managers feel extremely demotivated across nearly all domains. Addressing this problem is not simple given the depth of the problem. However having motivated professionals at this senior level must be important to organizations because of the value their experience can bring. The sense of disillusionment or betrayal needs to be addressed at an early stage in an individual’s career in terms of helping managers to better define their personal values and ensure that those values are expressed in their work so that they don’t end up in a position feeling trapped in what they do but unable to alter their course.</p>

6.7. Limitations

a) Susceptibility of the group to social pressures

Human beings in groups are subject to the influence of social pressures that evolved to better enable survival and procreation. These pressures may influence group discussion in a variety of ways including allowing dominant individuals an imbalanced weight in the voice of the group or the failure of dissenting voices to emerge. Such factors make it impossible to take focus group feedback as definitive proof of a proposition.

b) Sample selection and size

Samples were selected on a basis of convenience - leaving the door open for possible bias in selection and outcomes of focus groups. The limiting of focus group sizes to seven individuals cannot be guaranteed as a fair extrapolation of a general population. These limitations can only be diminished through a more random sampling process and the addition of a larger number of focus groups.

c) Facilitator Influence

In a focus group, a facilitator holds a position of authority and power in determining the flow of conversation. While effort may be made to facilitate in a neutral manner, questions asked by the facilitator, choices of when to continue a discussion or move on to a new one or simple body language and facial expression may serve to influence the course of a focus group discussion and bias results.

Chapter 7
Conclusion and Recommendations

University of Cape Town

Chapter 7

Conclusion and Recommendations

7.1. Contribution to Science

The primary contribution of this research to science lies in its presentation of a method of understanding the motivations of groups of professionals that allows for a more realistic visualization of the complex drivers of motivation than reductionist methods might offer. The argument derived from the review of literature dealing with the subject of human motivation is that the factors influencing human behaviour are too complex to yield to a static linear model of those influencers. The conceptual model of motivation presented differs from established models in that it does not seek to attribute particular relationships to motivation variables such as hierarchies or algebraic functions but rather allows that different individuals or groups of individuals in different contexts may prioritize variables in different ways.

Artificial neural network clustering has not in the past been applied to the task of grouping common motivational patterns or identifying outlying motivational patterns in groups. The value of such a process rests with the idea that it may be useful to identify divergent patterns of motivation unique to particular contexts and to develop methods of intervention in such contexts that address these divergent patterns as a method of improving the overall motivation of a group. In a workplace, a 10% across the board pay increase may be less useful in improving employee motivation than specific interventions that target the particular concerns of groups of employees who may feel strongly about one or more motivational variables.

The reductionist sciences are very good at telling us specific facts about simple systems in highly controlled circumstances. Trying to apply these methods to generating broad understanding of complex systems in highly variable or unpredictable environments results in data that is too often removed from real world relevance. The business sciences are concerned most often with complex systems in variable environments. Non-linear methods

of visualizing such systems, while less precise in their outcome or transparent in their formulation, offer a more realistic view of the complexity and diversity of the real world than reductionist methods.

7.2. Policy Recommendations

Creative Students and Creative Artists

The key finding of the fieldwork dealing with creative students was that some feel a sense of lack of security or control in their lives because life as a creative artist means on the one hand subjecting oneself to criticism or judgments of others and on the other hand financial instability and uncertainty. Both of these factors have to do with the relationship between artists and the public at large or the economies in which they operate.

Economies since the industrial revolution have been focused on production and means of production as core values. This differs from other times in history such as Classical Greek times when freedom from labour in the material world allowed one to pursue a life of speculation and introspection. Creative artists seem to pursue their work goals because those goals are intrinsically satisfying to them – and because they feel that self-expression in creative terms is the only path where they might find fulfilment. In contrast, some business managers and entrepreneurs seem to feel a distinct lack of meaning or personal fulfilment in the work they do.

There is a long tradition of commentary about the alienation of people from their labour, including the writing of Marx in 1844. The thrust of this argument is that divided labour dehumanizes its participants by making them into tools of production rather than individual beings working to fulfil their own ends. Creative artists in modern society seem to be individuals who feel unable or unwilling to deny their own creative potential in return for the comforts that participation in the formal economy might offer. They pay the price in the financial instability, uncertainty, criticism and alienation that they face as a result.

Addressing the insecurity experienced by creative students and artists requires, on a macro level, a re-evaluation of the place of the arts in modern society. If the arts and human creative pursuits are valued for their own merit rather than solely their contribution to production, then policy makers need to find ways of re-shaping societal beliefs that the arts are purely for entertainment and do not play a meaningful role in the formal economy.

In the absence of such reshaping, creative students and artists must find ways of dealing with the obstacles they face in the pursuit of their goals. Societal disapproval must be met with methods of self-affirmation and social support networks that can provide the positive social feedback that is so important to human beings. Artists must find inventive ways of bridging the gap between their creative talents and the formal economy – to present a value proposition to formal businesses that enables them to survive and thrive financially.

Entrepreneurs

Entrepreneurs surveyed provided the least clear results of the four groups. In retrospect this was possibly because the group of entrepreneurs surveyed represented the most diverse of all the groups. Some entrepreneurs were businessmen and women running small organizations because they had found no opportunities for employment in the formal sector. Others were visionaries who were pursuing or had already pursued and achieved visions based on the personal passion and belief in their capacity to succeed.

Despite this diversity, certain factors emerged as interesting in the motivations of this group. The finding that quite a few entrepreneurs don't feel a strong sense of meaning or novelty in their work was surprising since these qualities are those one might normally associate with the work of entrepreneurs. The focus group interpreted this feeling as relating to the reality that entrepreneurs often seem to get bogged down in the day to day operational requirements of running their businesses when they would rather be engaged in the more visionary aspects of growing the business or pursuing new opportunities. The fact that some of the entrepreneurs who felt this were more experienced or high performing entrepreneurs may be concerning for those wishing to promote entrepreneurial activity in a country like South Africa.

To address this issue it would seem important to help entrepreneurs to understand how to structure their businesses or activities in ways that free up their time to pursue the tasks they feel more suited to. Experienced or successful entrepreneurs may wish to engage in processes of regular renewal of their goals and visions to avoid losing touch with their own creative energy.

Business Managers

Business managers provided some interesting variation in results. The strongest outlier that stood out right from the beginning of the data clustering process was the group of older, experienced managers that felt extremely negative about nearly all motivational factors. Clearly this is a group that is very unhappy with the work they are doing. It is a large enough group to be of particular interest to organizations that may not wish to have a significant number of their most experienced managers feeling so unhappy in their jobs. The focus group explained this unhappiness by suggesting that these managers might feel betrayed by their organizations and disillusioned with their work. Again, it is not uncommon to hear of business managers who, nearing the ends of their careers, begin to feel dissatisfied with their careers. Younger managers strive to replace them and they can feel forced out of their organizations rather than able to contribute their hard earned wisdom or experience to them. This finding points to a need for organizations to better understand the feelings of experienced managers and to more effectively manage the needs of managers in latter stages of their careers.

Another group of managers felt a lack of opportunity for creative self-expression, a lack of connection to their co-workers or communities and a lack of alignment with the goals of their organization. Again, these are intuitive outcomes of alienation from labour that separates the worker from the final outcome of their production and disallows their own creative input to that production. Addressing this problem probably requires a shift in the hierarchical manner in which labour is divided in modern organizations. More participative goal setting processes, a greater focus on work / life balance and a more fluid method of allowing workers to contribute in their areas of valence may help to address these issues.

Managers who don't feel affirmed or supported in ways that make them feel competent is a straightforward problem and relates to the skills (or desires) of those around them to provide supportive feedback. Hierarchical models of modern organization potentially encourage competition among junior and senior managers. Methods of promotion do not necessarily yield managers who have the interpersonal skills required to affirm their peers, managers or subordinates. Greater focus on creating "flat" organizations in which contribution is a function of skill and valence rather than positional power may help to alleviate this problem.

Lastly, the single instance of individuals who felt more positive than the mean about a particular motivational factor fell to that group of business managers who felt that achieving their goal would bring them greater power or control. It was interesting that a high proportion of these managers were Black / African managers given the unique context of South Africa's past and present distortions in the racial demography of South African businesses. An overly optimistic expectation of increased power or control may point to an unrealistic expectation that could lead to disillusionment later on. It may be useful for organizations and policy makers to ensure a balanced and realistic perception of what personal outcomes achievement in business may bring.

7.3. Limitations and Future Research

Limitations

The main value of this research is as a proof of concept for how artificial neural network clustering can be used as a non-linear method of understanding motivational factors influencing groups and in particular, how such clustering can help to highlight some of the diversity of motivation that exists within groups.

The efficacy of such a process depends on:

- a) Including useful motivational variables in the modelling of a motivational system.
- b) Finding a satisfactory method of assessing how a group of individuals feel about these variables.
- c) Finding a satisfactory method of interpreting the results of the clustering of these variables.

The limitations of the study relate to limitations in how each of these variables was fulfilled. Motivational variables used in the study were drawn from a model of motivation that is well supported by a number of studies of motivation. These variables are not however exhaustive and represent only one set of potentially myriad variables that could be included in a clustering process. The feelings of a group of people towards their work may be more effectively captured by excluding certain motivational variables or including others.

In terms of assessment, a self-assessment tool contains clear limitations. Respondents do not necessarily give an accurate reading of their own motivations but may provide readings that are biased. This is a limitation of self-assessment and not easily overcome. Outcomes

can also be influenced by the nature of the scale used for questioning and the phrasing of questions themselves. In the first part of the fieldwork, respondents generally restricted themselves to varying their answers between “somewhat agree” and “strongly agree”. A different scale and method of questioning may have yielded greater variation in response along the scale and so yielded more meaningful answers.

In terms of interpretation of the meanings of outlying patterns in motivation, focus groups can only offer a snapshot of a small number of people’s interpretation of the meaning of a finding. In some cases, findings related strongly to particular demographic qualities like age or race that may not have been adequately represented in the focus groups themselves. This could lead to distorted answers.

Overall one of the greatest limitations of the study lies in the fact that numbers of respondents for both parts of the fieldwork had to be restricted for practical reasons. The clustering of groups of only fifty respondents could provide patterns in motivation that are coincidental and not generalizable to a general population. The larger the sample size clustered, the more likely that outlying observations might represent a meaningful result. Similarly, combining interpretations of several focus groups would yield potentially more significant results than the interpretations of a single focus group.

Future Research

Future research might focus on testing a non-linear conceptual model of motivation as a means of improving the motivations of workers in organizational settings. The process would be to use the non-linear conceptual model and artificial neural networks to interrogate the motivational dynamics of a given organizational system and then to implement targeted interventions based on the findings of such a study. Results of such interventions could be compared with those from more linear interventions in order to establish whether in fact a non-linear method of intervening in the motivational system of an organization might have a greater effect on worker motivation than more conventional linear approaches.

Research could also experiment with using different motivational variables in the ANN clustering process to see whether the addition of more variables or exclusion of certain variables might result in more useful visualizations of motivational diversity.

7.4. General Conclusion

This study began with a feeling drawn from my own experiences and the sense that the formal processes by which organizations interface with human beings – and particularly their employees – is somehow deficient. That people have a complexity of psychology and a diversity of needs that are not properly understood or catered for by the standard conceptual model of the organization.

A study of the philosophy and psychology of human behaviour confirmed a view of human beings as motivationally complex and introduced the idea that behaviour is best modelled, understood and engaged with as a complex system rather than a linear, causal equation. This finding presents a challenge to the organizational model designed on a basis of standardization of roles and processes. How do we integrate a complex human psychology with the linear systems and processes upon which businesses must run? How do we merge human needs for a diversity of motivators like social connectedness, a sense of meaning, opportunity for growth or a sense of self efficacy – with a model of divided labour that requires each individual to apply themselves to a narrowly defined set of responsibilities?

The answer of the industrial revolution to this challenge of integration was to create a fiction that human beings can be motivated primarily by expectation of financial reward. That the workplace should be a space for labour and that individual feelings, opinions and differences should be left at home - for the evenings or the weekends. This model may allow for the production of goods – but in the words of John Dewey – it is not suited to the production of free human beings who are associated with one another on terms of equality.

The dismantling of this fiction is not so great a labour given the reality that human beings, regardless of formally defined organizational mandates, tend organically and of their own accord to support authentic values of human motivation. Groups of co-workers form their own support systems, find their own places of meaning and bring to one another their own affirmations of achievement. This “sub-system” lives on wherever human beings interact. The question remains however – of how to bring closer together the fictional account of human behaviour that often informs management decisions with the realities of behaviour and motivation as they *exist* within organizations. A first step is to find ways of understanding or visualizing this reality that more realistically captures its non-linear, systemic qualities.

Artificial neural network clustering, as a non-linear method of analysing data, allows information that exists within data to emerge rather than imposing preconceptions upon it and “making it fit”. This is not unlike the qualitative approach that some managers use in diagnosing the climates of their organizations every day – allowing informal observations and encounters to coalesce into intuitions that can be followed up on, explored and addressed where need be. The inadequacy of such non-linear methods is that they are not exact. They do not offer a manager quantifiable certainties on which to base decisions. However when such certainties are fictional constructs created to fill gaps of uncertainty rather legitimately expose truth, inexact methods are preferable. What non-linear methods offer are starting points for understanding the complexities of a system - methods of drawing attention towards dynamics that could lead to a deeper understanding of it.

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Appendix A

Theories of Motivation from the Psychological Sciences

Table 24: Theories of Motivation from the Psychological Sciences

Theory	Description	Primary Text
Instinct Theory	A biological "instinct" drives each human behaviour.	The Principles of Psychology (William James, 1890)
Arousal Theory	Behaviours exist on a continuum of biological arousal from sleep to rage.	The Relation of Strength and Stimulus to Rapidity of habit formation (Yerkes and Dodson, 1908)
Psychoanalytic Theory	Motivation stems from two biological drives - Libidos and Thanatos.	Beyond the Pleasure Principle (Sigmund Freud, 1920)
Psychogenic Needs Theory	Biological and psychological impulses create readiness to respond under certain conditions.	Explorations in Personality (Henry Murray, 1938)
Drive Reduction Theory	Biological drives are influenced by a process of environmental conditioning.	Principles of Behaviour (Clark Hull, 1940)
Maslow's Theory of Motivation	Biological and psychological needs express themselves in a hierarchy.	A Theory of Human Motivation (Abraham Maslow, 1943)
Logotherapy	Motivation is influenced by the cognitive meaning assigned to events.	Man's Search for Meaning (Victor Frankl, 1946)
Cognitive Consistency Theory	Motivation is influenced by a need to maintain a positive self image.	Theory of Cognitive Dissonance (Leon Festinger, 1951)
Expectancy-Value Theory	Motivation is influenced by cognitive dimensions of expectation of success, perceived value of a goal and self efficacy.	A Theoretical and Empirical Investigation of the Interplay between Belief about an Object and the Attitude towards that Object (Fishbein, 1963)

Attribution Theory	Motivation is influenced by a need to maintain a positive self image.	The Psychology of Interpersonal Relations (Fritz Heider, 1958)
Disconfirmation Bias	Motivation is influenced by tendencies to ignore evidence countering existing beliefs.	Thinking and Reasoning (Peter Wilson, 1960)
Acquired Needs Theory	Biological needs are influenced by a process of environmental conditioning.	The Achieving Society (Dave McClelland, 1961)
Reactance Theory	Motivation is influenced by a need for freedom.	A Theory of Psychological Reactance (Jack Brehm, 1966)
Reinforcement Sensitivity Theory	Motivation results from the pursuit of pleasure and avoidance of pain.	Causal Models of Personality and How to Test Them (BF Skinner, 1969)
Kahler's Drivers	There are five basic needs: be strong; be perfect; hurry up; please others; try hard	Transactional Analysis (Kahler, 1975)
Social Learning Theory	Motivation results from the observation and imitation of behaviours in others.	Social Learning Theory (Albert Bandura, 1977)
ERG Theory	Motivation results from needs for existence, relatedness and growth.	An Empirical Test of a New Theory of Human Need (Clayton Alderfer, 1982)
Self Determination Theory	Needs for competence, relatedness and autonomy.	Intrinsic Motivation and Self Determination in Human Behaviour (Ryan and Deci, 1985)
Self Discrepancy Theory	Need to maintain consistency between behaviours and set of internal "self guides".	Self Discrepancy - A Theory Relating Self and Effect (Higgins, 1987)
Self Efficacy Theory	Belief in capability is required for action.	Human Agency in Social Cognitive Theory (Bandura, 1989)
Goal-Setting Theory	Motivation is influenced by the establishment of goals perceived as	Building a Practically Useful Theory of Goal Setting and Task Motivation

	worthwhile.	(Locke,Latham, 1990)
Choice Theory	Needs for survival, belonging, power, freedom and fun.	Control Theory (Glasser, 1999)
Cumulative Prospect Theory	Motivation is influenced by subjective evaluation of a base starting point.	Advances in Prospect Theory - Cumulative Representation of Uncertainty (Tversky and Kahneman, 1992)
Hyperbolic Discounting	Motivation is influenced by perceptions of desirability of goals based on time.	Picoeconomics (Ainslie, 1992)
Temporal Motivation Theory	Motivation is influenced by perceptions of desirability of goals based on time.	Procrastination and personality, performance and mood (Piers Steel, 2004)
Selective Investment Theory	Altruism has a genetic basis.	Selective Investment Theory: Recasting the Functional Significance of Close Relationships (Brown and Brown, 2006)

Appendix B

Theories of Work Motivation

Table 25: Theories of Motivation from the Business Sciences

Theory	Description	Originator	Primary Text	Date
Scientific Management	Reason - for the good of company to maximise income	Frederick Taylor	Principles of Scientific Management	1909
Human Relations Model	Emotional needs - recognition, social acceptance etc.	Elton Mayo	The Human Problems of an Industrial Civilisation	1933
Immaturity / Maturity Theory	Views motivation as changing over time from immature to mature motivations	Chris Argyris	Personality and Organization	1957
Expectancy Value Theory	Motivation is influenced by perception of the desirability and achievability of a task	Martin Fishbein	A Theoretical and Empirical Investigation of the Interplay between Belief about an Object and the Attitude towards that Object	1957
McGregor's X/Y Study	Work is improved under conditions of empowerment	Douglas McGregor	The Human Side of Enterprise	1960
Herzberg's Two Factor Theory	Job satisfaction / dissatisfaction are independent	Frederick Herzberg	The Motivation to Work	1968
Equity Theory	Motivation is decreased without fair compensation for efforts	J Stacy Adams	Inequity in Social Exchange	1963

Appendix C

Systems and Complexity Theory Terms and Definitions

Table 26: Systems and Complexity Theory Terms and Definitions

Concept	Description	Originator	Field
Adaptive Capacity	Resilience of a system in the face of perturbation.	Various	Biology
Allopoiesis	The process by which a system produces something other than itself.	Maturana; Varela, 1973	Biology
Allostasis	The process by which a system achieves equilibrium.	Maturana; Varela, 1973	Biology
Attractor	A property that has the capacity to influence a system.	Lorenz, 1963	Mathematics
Autopoiesis	The self-sustaining nature of a system.	Maturana; Varela, 1973	Biology
Bifurcation	A tipping point at which a system escapes an attractor.	Various	Mathematics
Black Box	A system with unknown properties.	Wiener	Cybernetics
Butterfly Effect	The sensitive dependency of a system on initial conditions.	Hadamard, 1890	Mathematics
Cascading Failure	The process by which failure of one system has a knock on effect causing other systems to fail.	Various	Information technology
Chaordic	A description of the dual chaotic and ordered nature of a system.	Hock, 2000	Management Theory

Chaos Theory	A theory reflecting that order and chaos within systems are not opposites but are in fact interdependent.	Poincare, 1890	Mathematics
Closed System	A system that does not interact with external factors.	Boyle, 1656	Physics, Engineering
Complex System	A system containing numerous components with multiple levels of interaction.	Various	Mathematics, Biology, Sociology
Complimentarity	The idea that any two points in a system will reveal truths about that system that are neither wholly independent nor entirely compatible.	Bohr, 1928	Physics
Compensating Feedback	A quality of a system whereby an action produces a counteracting balancing action.	Senge, 1990	Management Theory
Connectivity	The idea that all points in a system are connected to all other points in some fashion.	Various	Physics
Conservatism	The idea that a system requires constancy in order to maintain its integrity.	Various	Politics
Co-evolution	The manner in which a system maintains integrity by changing with its environment	Wheatley, 1999	Management Theory
Determinism	The idea that all events can be traced backwards or forwards through a principle of causality.	Various	Philosophy, Physics
Dissipation	The capacity for a system to disintegrate but still retain its fundamental form.	Various	Physics
Dynamic Complexity	A quality of a system whereby actions have different effects over short and long time periods, different effects at one part	Senge, 1990	Management Theory

	compared with another and when interventions in the system produce unexpected outcomes.		
Dynamic Stability	A quality of a system that means it continues to produce required performance during turbulence.	Senge, 1990	Management Theory
Emergence	The appearance of complexity out of the interaction of simple variables.	Various	Various
Enantiostrasis	The capacity of a system to maintain integrity within an unstable environment.	Various	Biology
Entropy	The amount of disorder in a system.	Carnot, 1803	Physics
Equilibrium	A state of balance between opposing forces.	Various	Physics
Far from Equilibrium	A quality of a system approaching a state of chaos (a state in which new properties can emerge)	Prigogine, 1970	Physics
Fractal	A description of a system in which each part reflects the whole.	Mandelbrot, 1975	Mathematics
Heterarchy	Contrast to hierarchy - a system in which the ordering of elements depends upon temporal conditions of the entire system.	Various	Biology
Holon	A phenomenon that is simultaneously a whole and a part.	Koestler, 1967	Systems Theory
Holarchy	A hierarchy of holons.	Koestler, 1967	Systems Theory
Holism	A way of understanding emergent properties without resorting to reductionism.	Aristotle	Philosophy

Indeterminacy	The more precisely one value is known, the less precisely another might be.	Heisenberg, 1979	Physics
Interdependence	A state of interconnectedness and mutual reliance.	Marx, 1848	Politics
Interventionism	The idea that one should intervene in a system to prevent disequilibrium	Various	Politics
Leverage Point	A point in a system where an application of force can have a large influence on the system.	Various	Various
Limits to growth	Feedback within a system that increases with the expansion of that system and acts to inhibit further growth of the system.	Senge, 1990	Management Theory
Non-linearity	A description of a system that cannot be reduced to a combination of independent components.	Various	Mathematics
Open System	A system that continually interacts with its environment.	Boyle, 1656	Physics, Engineering
Perturbations	An alteration that precedes emergence in a system.	Various	Biology, Economics, Physics
Self iteration	The proliferation of fractal forms.	Various	Various
Self organization	A process by which a system increases in complexity without external intervention.	Kant; Ashby, 1956	Philosophy; Cybernetics
Self reference	A paradox or valid reasoning that leads to contradiction.	Godel, 1931	Mathematics
Sensitivity	The susceptibility of a system to minor perturbations.	Various	Various

Strange attractor	A powerful fractal or meme that emerges in a system undergoing transformation and has a strong influence on that system. Responsible for spontaneous change once embedded.	Lorenz, 1963	Mathematics
Window of Opportunity	Moment before limit to growth when there is opportunity for intentional dissipation as a means of stimulating new emergence.	Senge, 1990	Management Theory

(Ashby, 1956; Lorenz, 1963; Beer, 1979; Bohm, 1980; Capra, 1996; Checkland, 1981; Forrester, 1968; Gleick, 1987; Prigogine, 1970; Senge, 1990)

University of Cape Town

Appendix D

Field Work: Work Motivation Survey

Instructions: Think about the work-related goal that is of highest importance to you at the moment and that you are actively pursuing. Mark a cross over the multiple-choice option that best applies to your feelings about that goal

SECTION A						
For this section, think about what <i>actually achieving</i> the goal will mean to you.						
1. Achieving the goal will increase my power or control over my life						
Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
2. Achieving the goal will increase my security or freedom from doubt						
Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
3. Achieving the goal will increase the variety or novelty in my life						
Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
4. Achieving the goal will bring approval from my friends, family or community						
Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
5. Achieving the goal will reflect that I have grown personally.						
Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
6. Achieving the goal has a strong personal "meaning" for me.						
Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
7. I am 100% certain that if I perform well I will achieve the goal						
Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
8. I see myself as 100% capable of performing tasks required to achieve the goal						
Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree

SECTION B

For this section, think about the feedback you get from your environment *while pursuing* the goal

9. While pursuing the goal I get feedback that makes me feel powerful and in control

Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
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10. While pursuing the goal I get feedback that makes me feel secure or free from doubt

Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
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11. While pursuing the goal I get feedback of variety or novelty

Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
-------------------	----------	-------------------	---------	----------------	-------	----------------

12. While pursuing the goal I get approval from my friends, family or community

Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
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13. While pursuing the goal I get feedback that reflects that my efforts have significant “meaning”

Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
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14. While pursuing the goal I get feedback that indicates I am 100% capable of performing tasks required to achieve the outcome

Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
-------------------	----------	-------------------	---------	----------------	-------	----------------

15. While pursuing the goal I get feedback that indicates it is 100% certain that my performance will lead to achievement of the outcome

Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
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Personal Information

Age _____

Gender

Male	Female
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Race

African/Black	Coloured	Indian/Asian	White	Other (specify)
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Highest educational qualification

High school	Undergraduate degree	Postgraduate degree	Other (specify)
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Annual income (in Rands)

0-132,000	132,000-210,000	210,000-290,000	290,000-410,000	410,000-525,000	Over 525,000
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Number of years of professional experience _____

Appendix E

Field Work: Cluster Means, Variances and Demographic Outliers – Creative Students

Figure 58: Creative Students – Sample Means

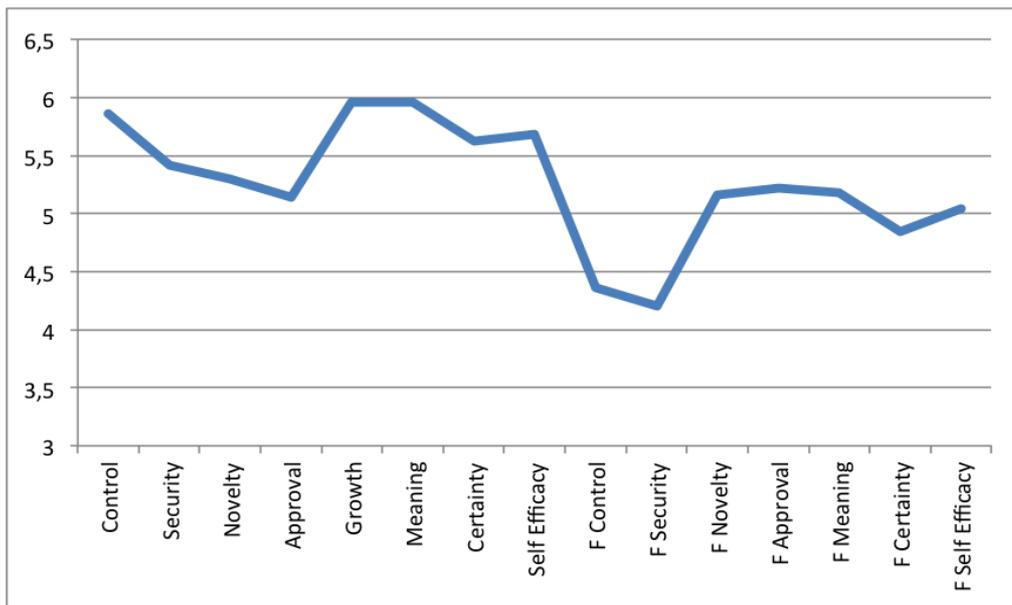
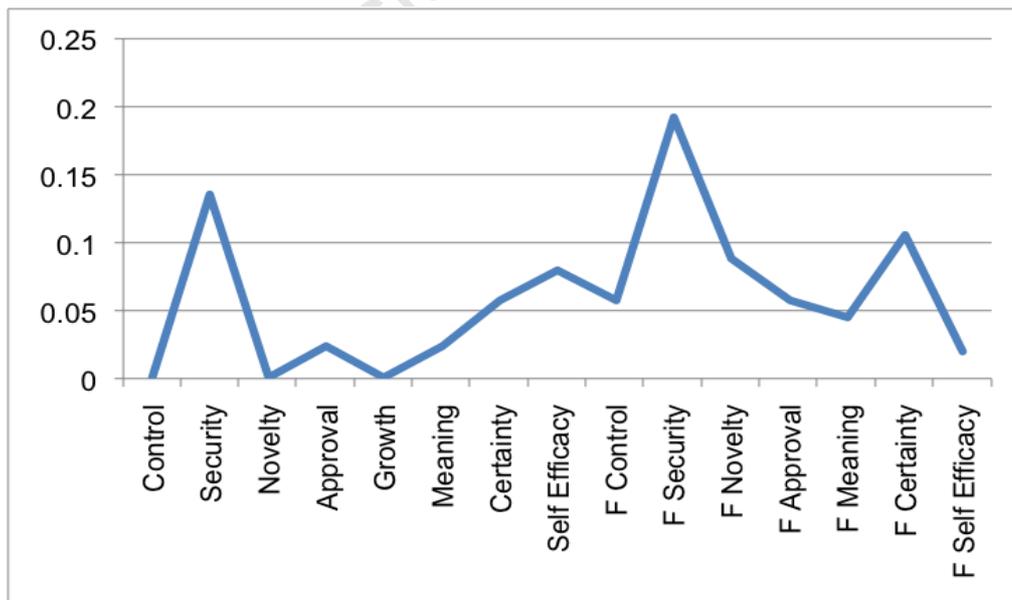


Figure 59: Creative Students – Variances from Sample Means



Cluster 1 - description (14% of sample)

Figure 60: Creative Students - Cluster 1, Means

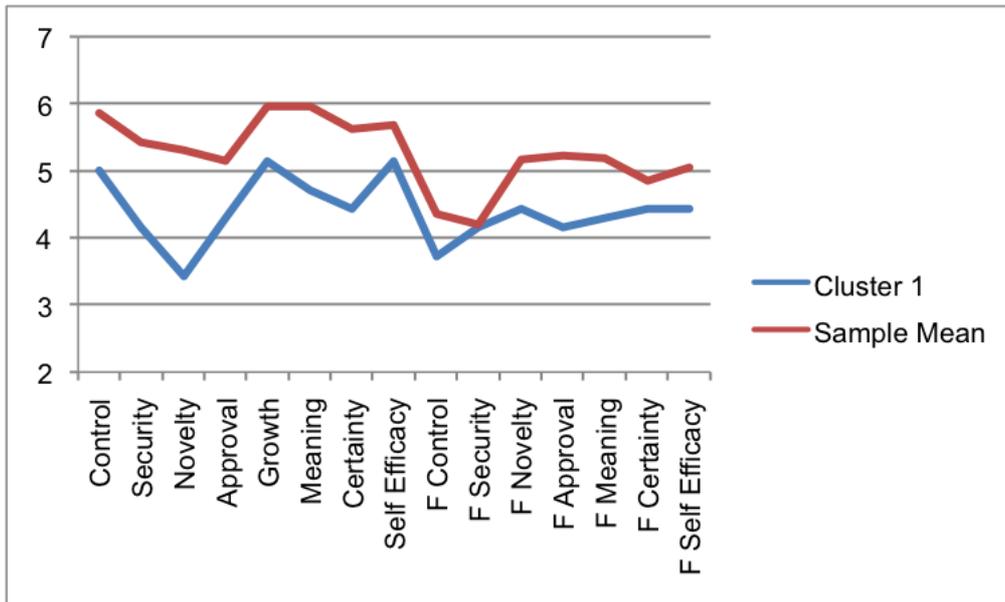


Figure 61: Creative Students - Cluster 1, Variances from Sample Means

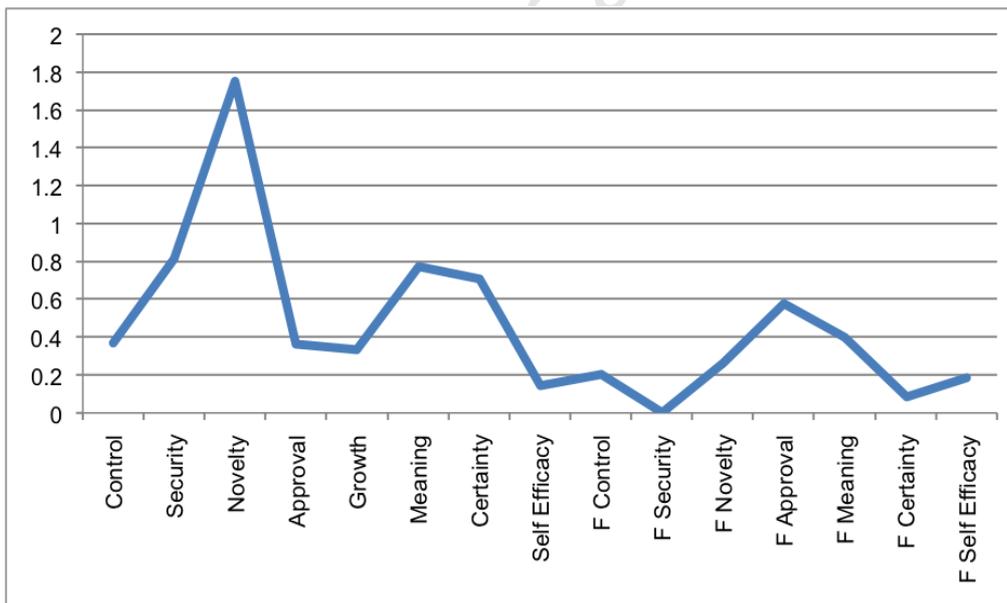


Table 27: Creative Students - Cluster 1, Demographic Outliers

Demographic	Cluster Percentage	Total Sample Percentage
n/a		

Cluster 2 - description (10% of sample)

Figure 62: Creative Students - Cluster 2, Means

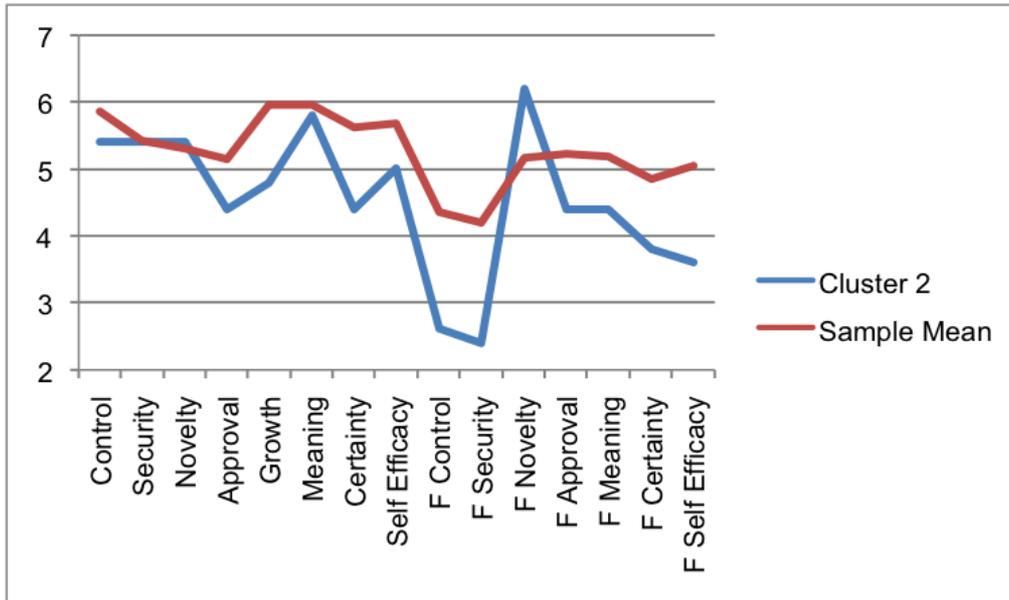


Figure 63: Creative Students - Cluster 2, Variances from Sample Means

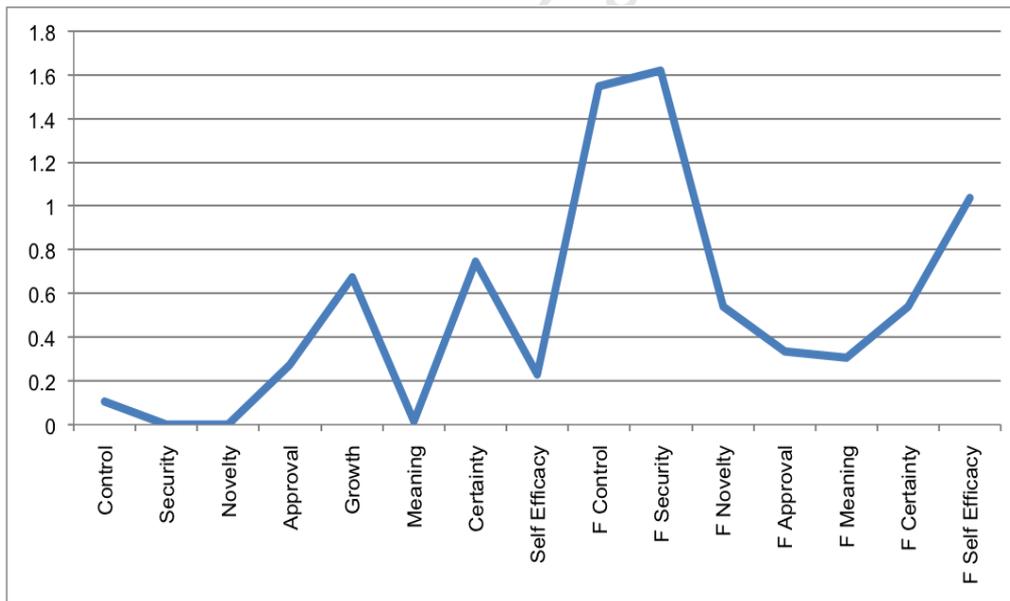


Table 28: Creative Students - Cluster 2, Demographic Outliers

Demographic	Cluster Percentage	Total Sample Percentage
Qualification	100% Postgraduates	2% Postgraduates

Cluster 3 - description (16% of sample)

Figure 64: Creative Students - Cluster 3, Means

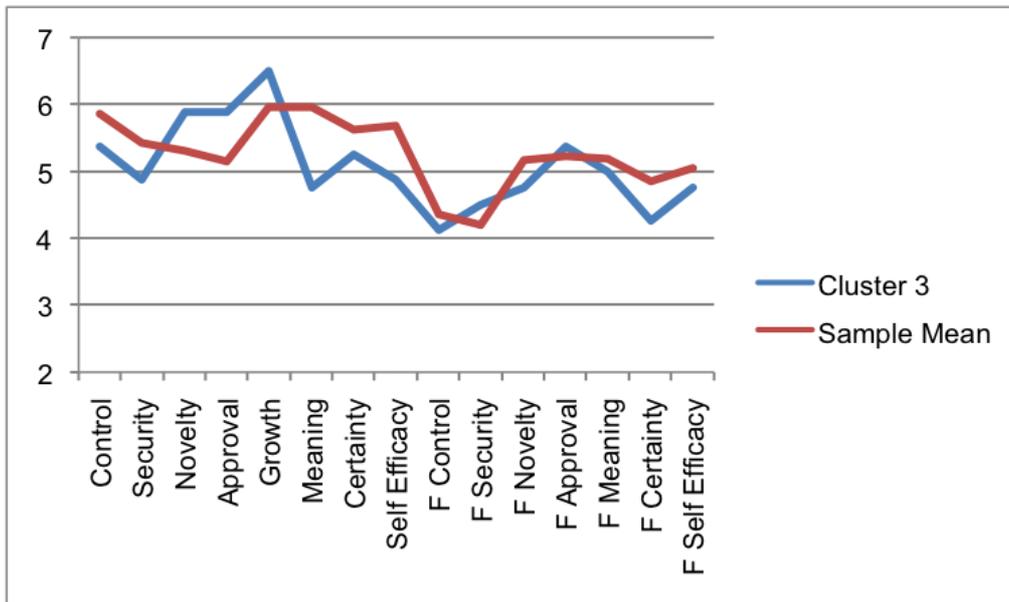


Figure 65: Creative Students - Cluster 3, Variances from Sample Means

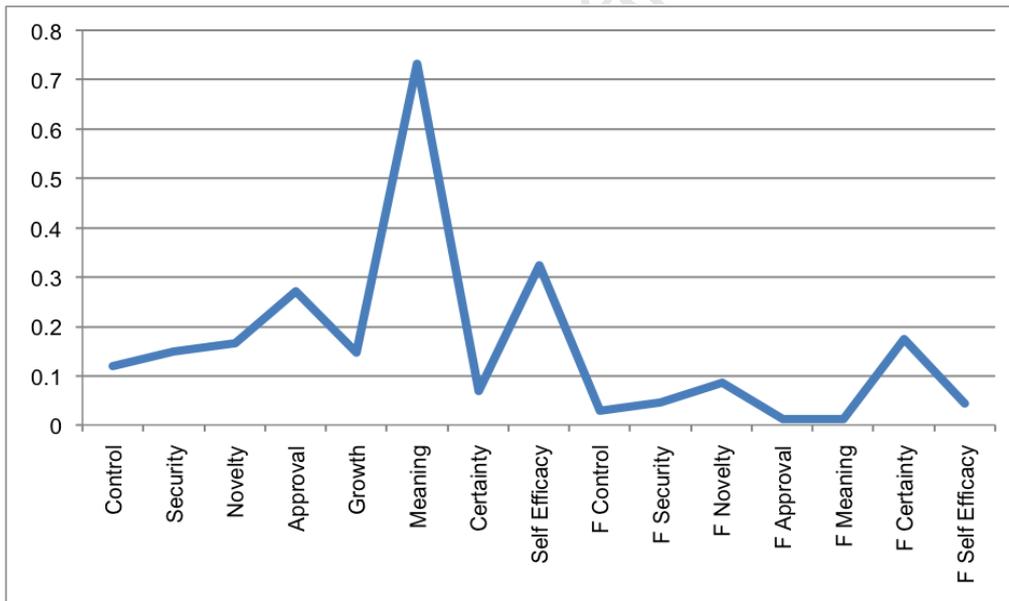


Table 29: Creative Students - Cluster 3, Demographic Outliers

Demographic	Cluster percentage	Total Sample Percentage
Qualification	50% Undergraduates	28% Undergraduates

Cluster 4 - description (18% of sample)

Figure 66: Creative Students - Cluster 4, Means

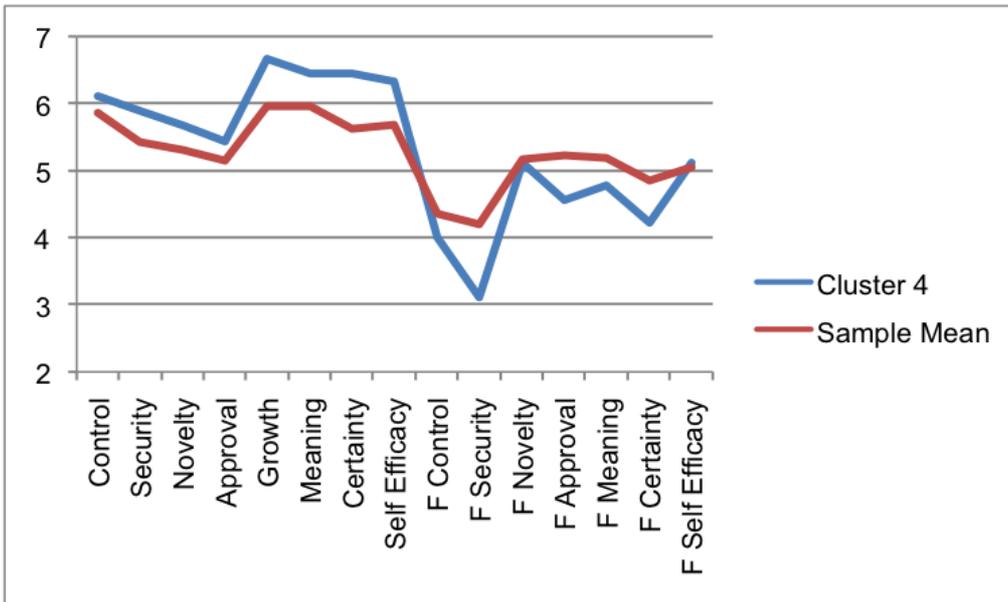


Figure 67: Creative Students - Cluster 4, Variances from Sample Means

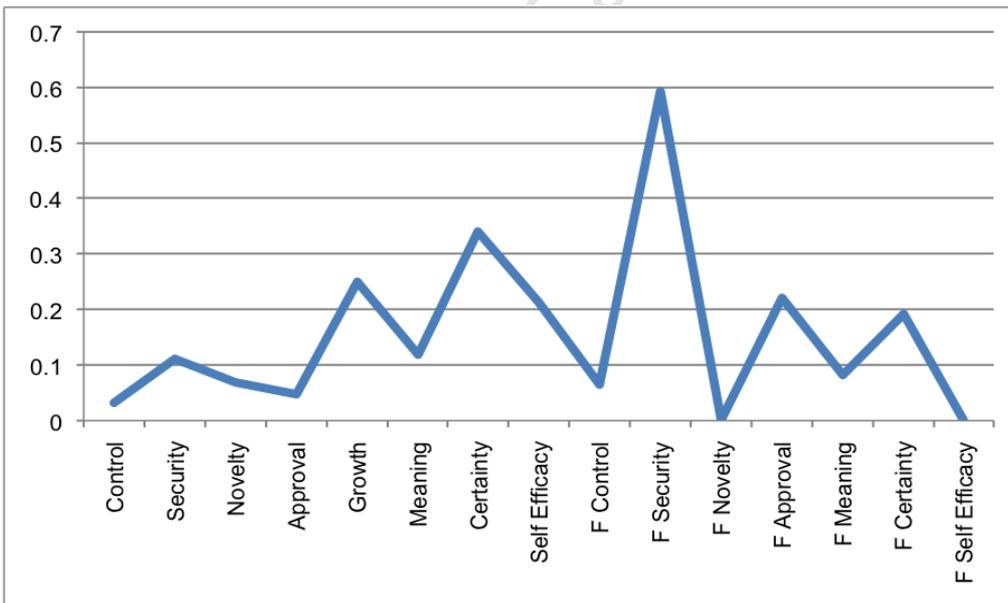


Table 30: Creative Students - Cluster 4, Demographic Outliers

Demographic	Cluster Percentage	Total Sample Percentage
n/a		

Cluster 5 - description (14% of sample)

Figure 68: Creative Students - Cluster 5, Means

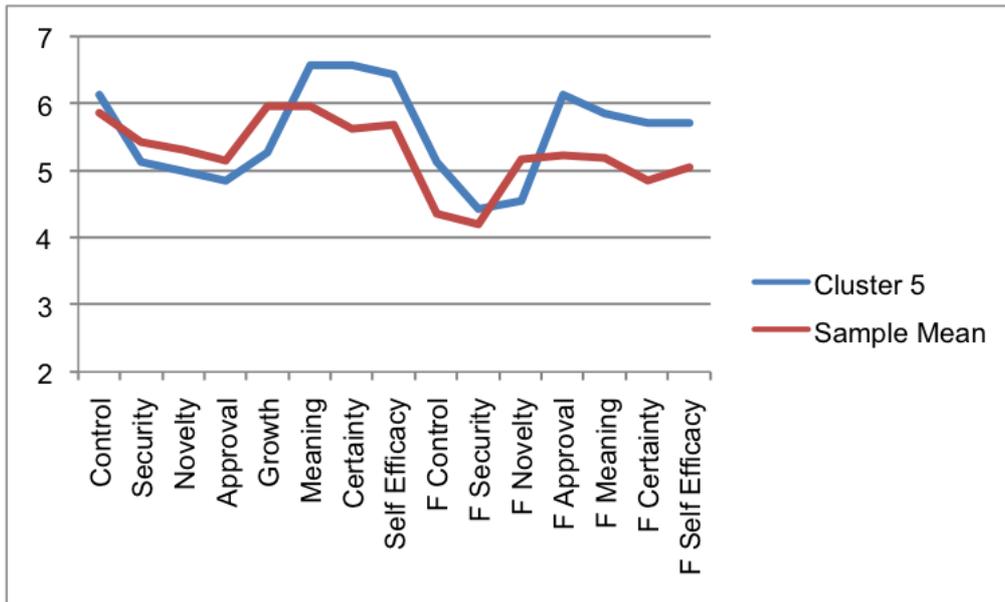


Figure 69: Creative Students - Cluster 5, Variances from Sample Means

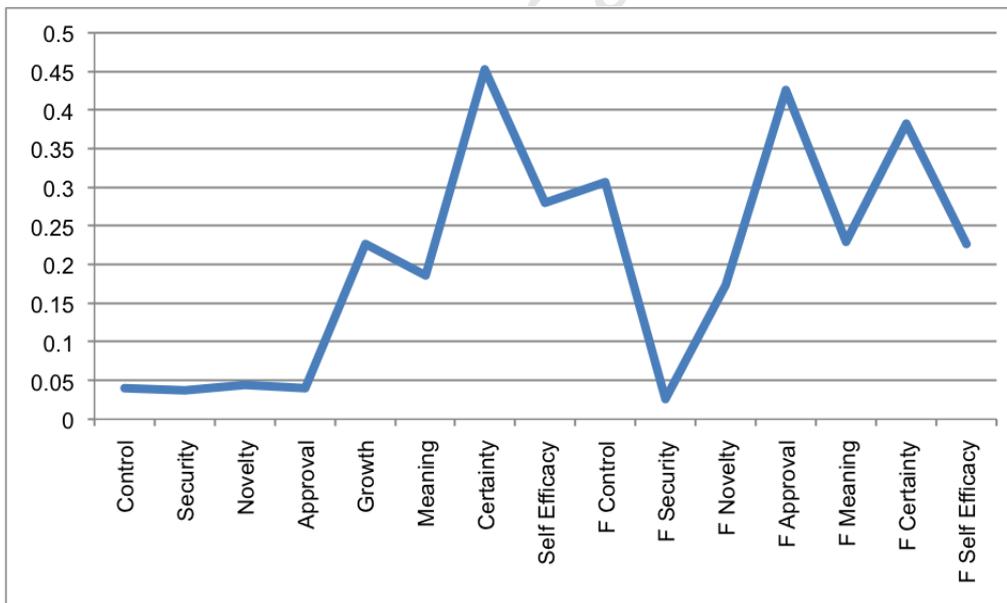


Table 31: Creative Students - Cluster 5, Demographic Outliers

Demographic	Cluster Percentage	Total Sample Percentage
n/a		

Cluster 6 - description (28% of sample)

Figure 70: Creative Students - Cluster 6, Means

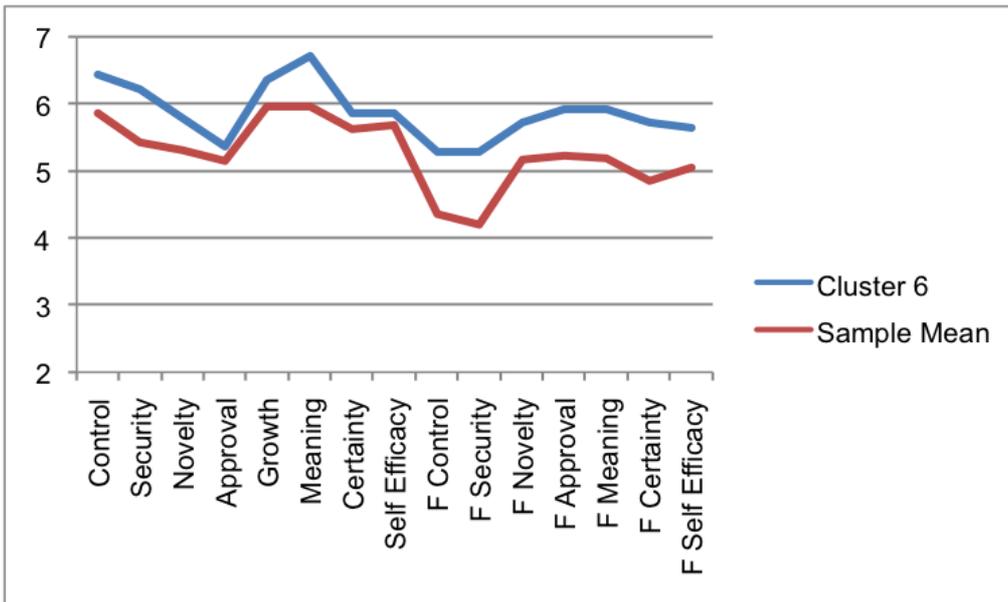


Figure 71: Creative Students - Cluster 6, Variances from Sample Means

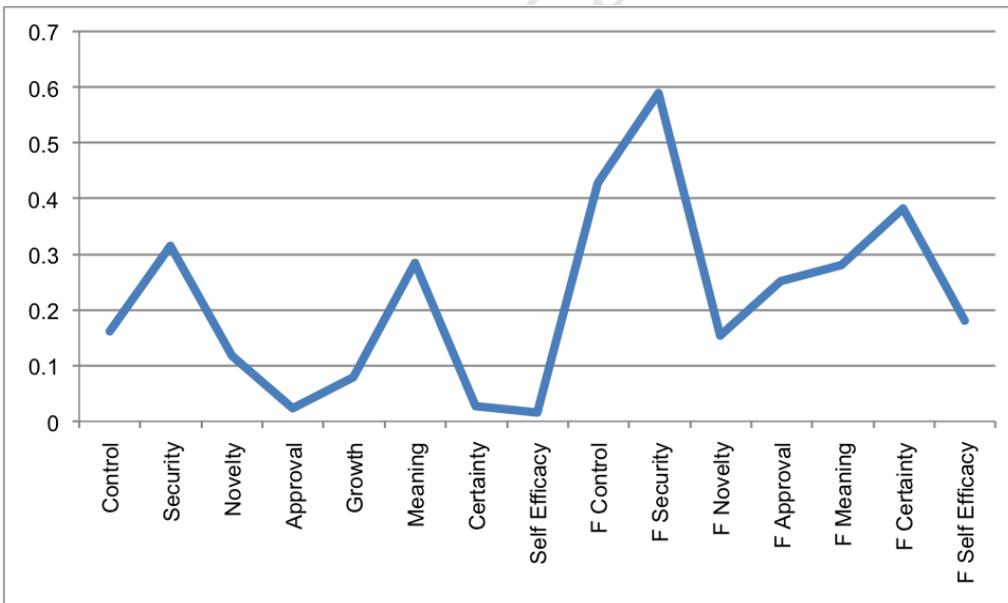


Table 32: Creative Students Cluster 6, Demographic Outliers

Demographic	Cluster Percentage	Total Sample Percentage
n/a		

Appendix F

Field Work: Cluster Means, Variances and Demographic Outliers – Professional Creative Artists

Figure 72: Creative Professionals, Sample Means

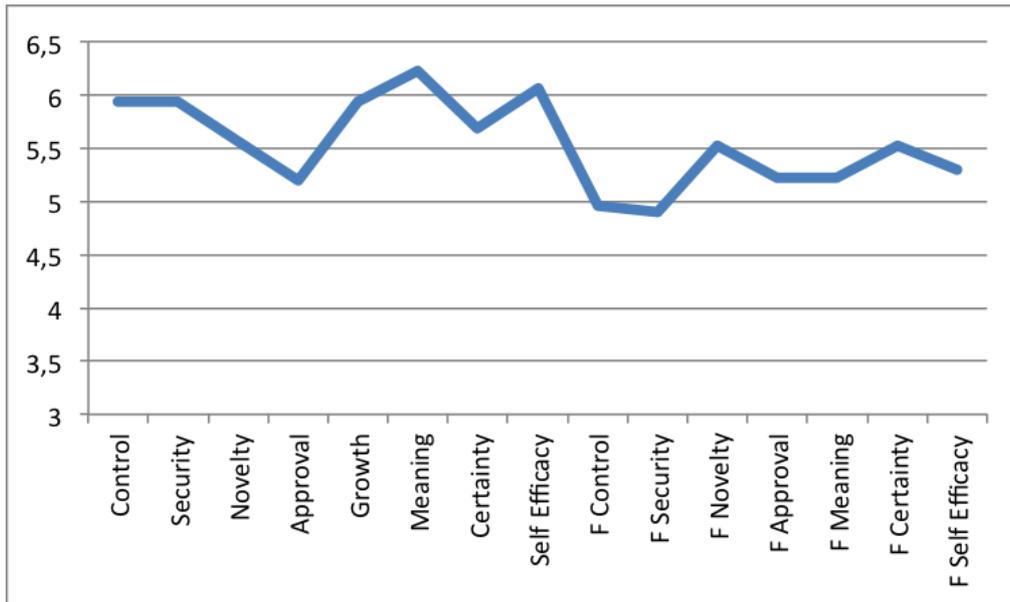
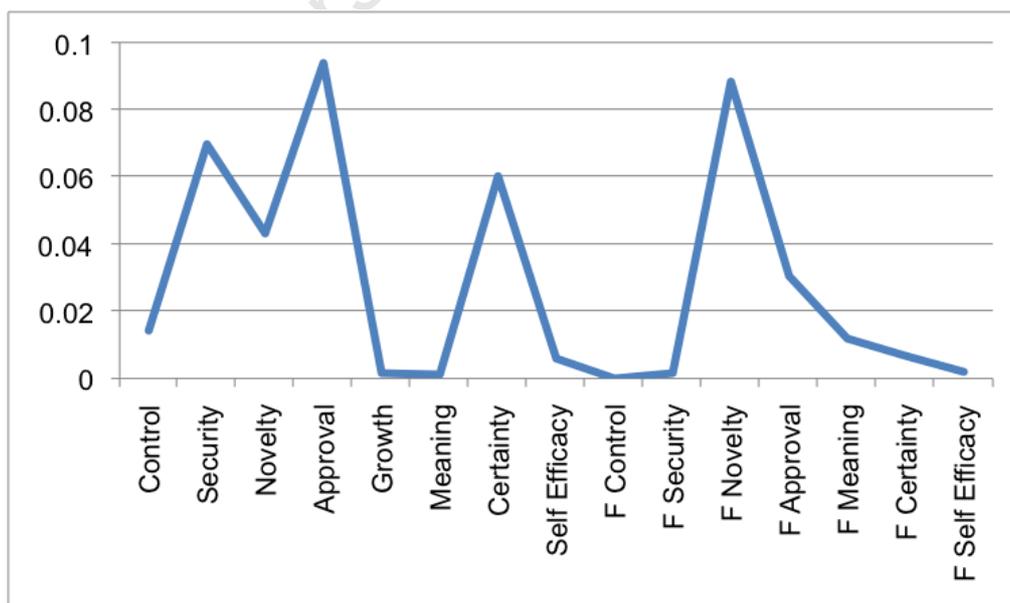


Figure 73: Creative Professionals, Variances from Sample Mean



Cluster 1 – description (14% of sample)

Figure 74: Creative Professionals - Cluster 1, Means

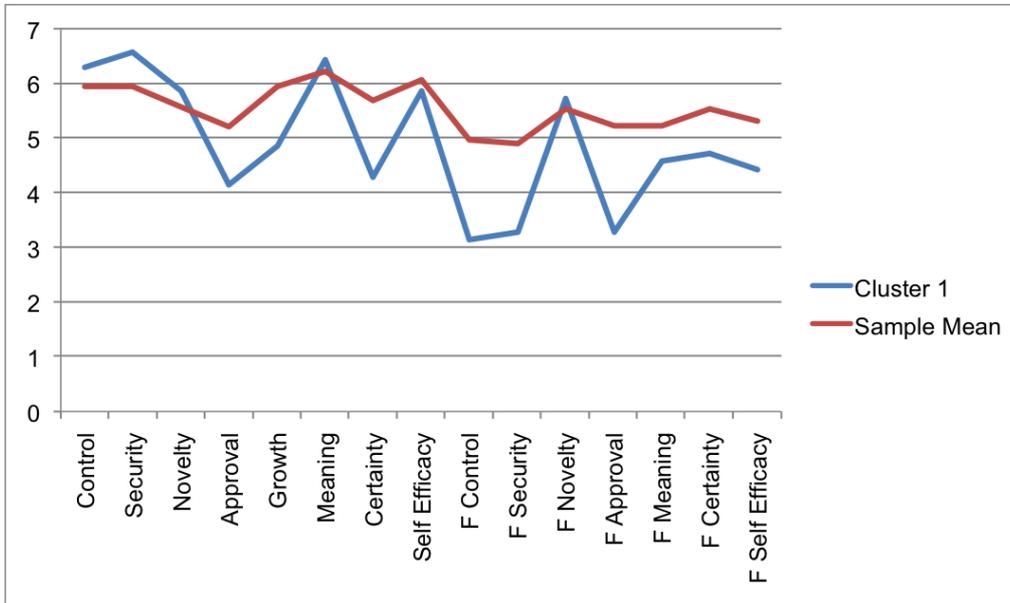


Figure 75: Creative Professionals - Cluster 1, Variances from Sample Means

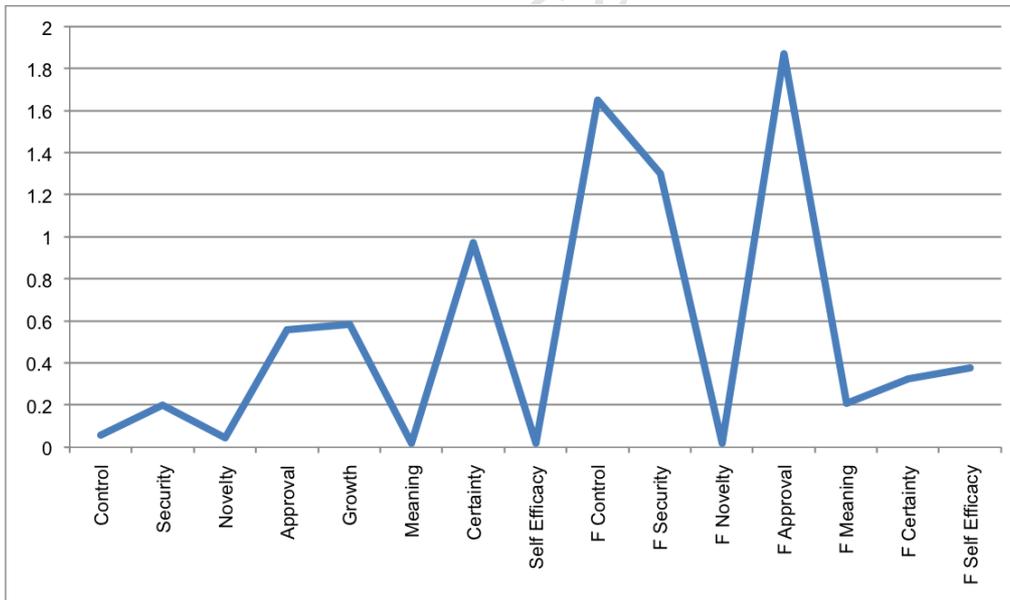


Table 33: Creative Professionals - Cluster 1, Demographic Outliers

Demographic	Cluster Percentage	Total Sample Percentage
n/a		

Cluster 2 – description (10% of sample)

Figure 76: Creative Professionals - Cluster 2, Means

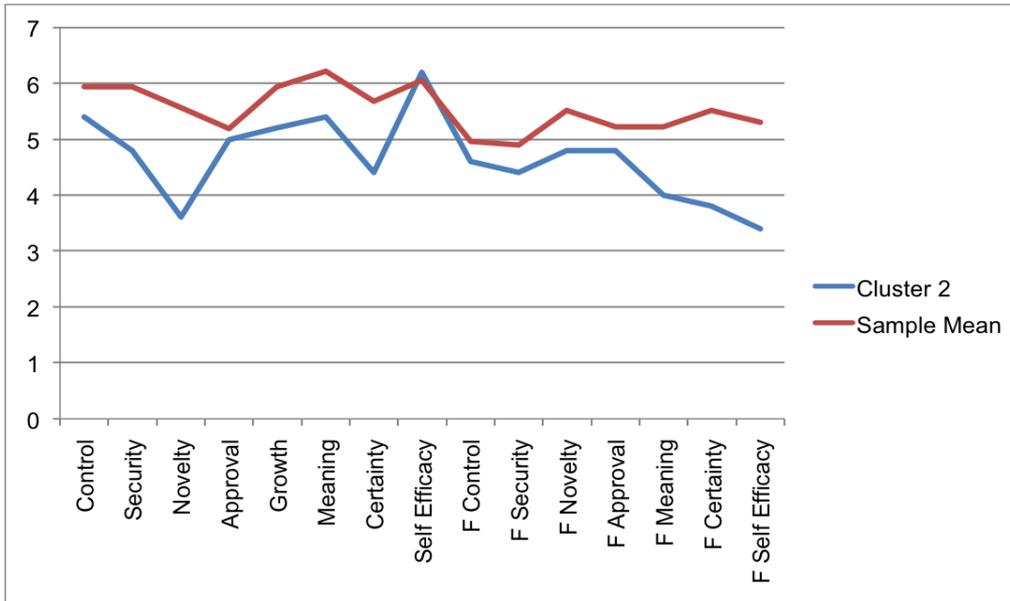


Figure 77: Creative Professionals - Cluster 2, Variances from Sample Means

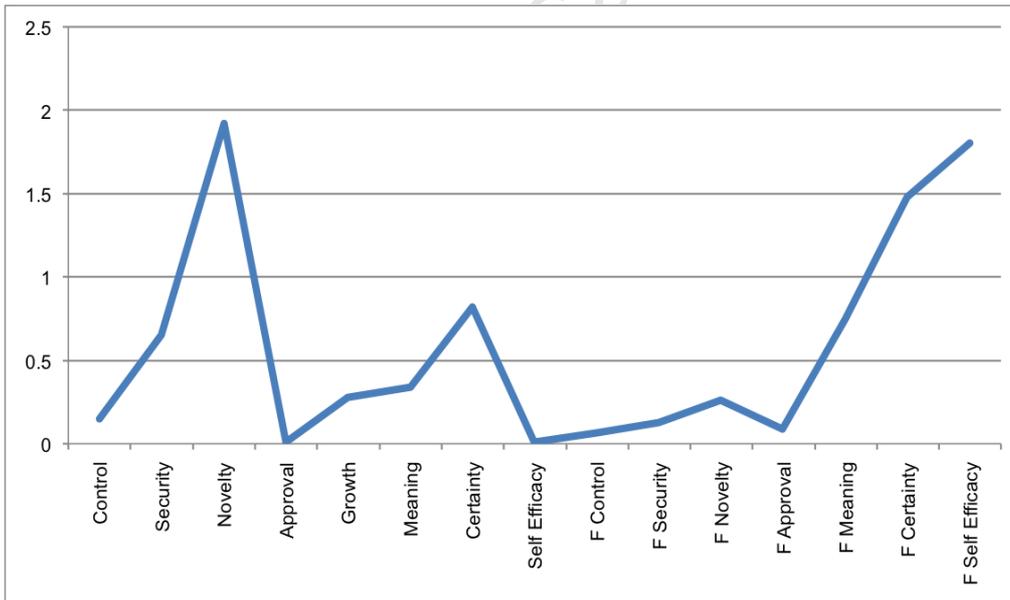


Table 34: Creative Professionals - Cluster 2, Demographic Outliers

Demographic	Cluster Percentage	Total Sample Percentage
Gender	80% Male	46% Male

Cluster 3 – description (10% of sample)

Figure 78: Creative Professionals - Cluster 3, Means

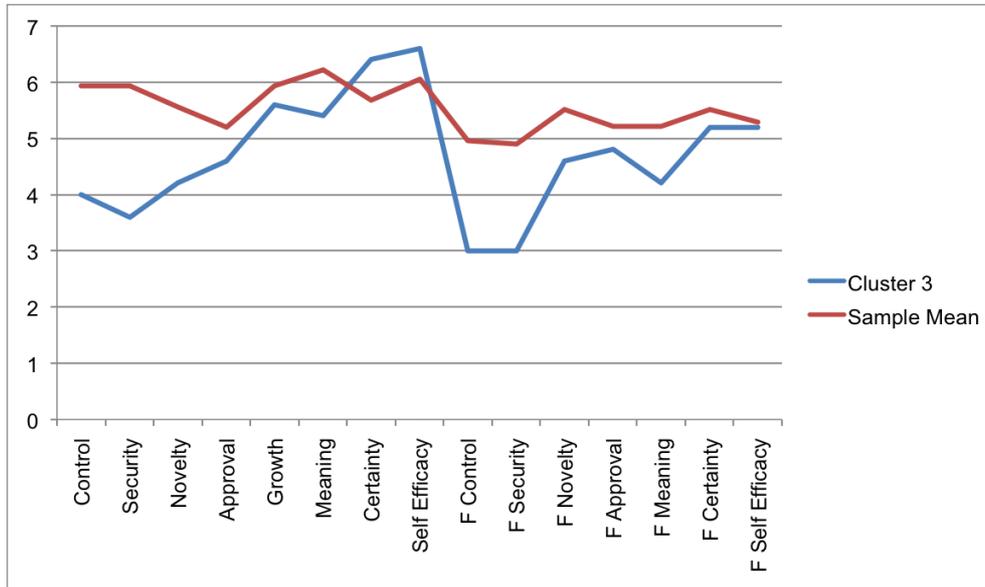


Figure 79: Creative Professionals - Cluster 3, Variances from Sample Means

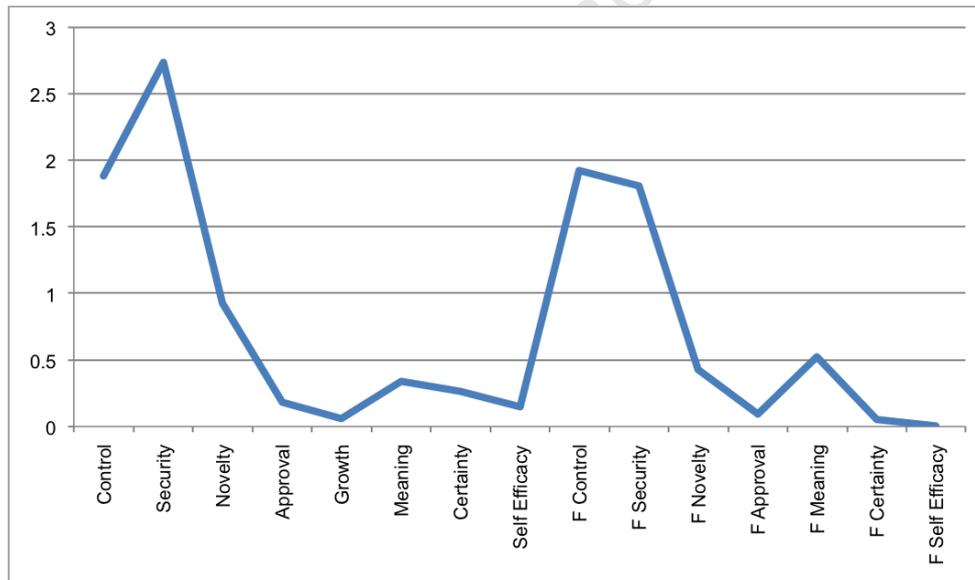


Table 35: Creative Professionals - Cluster 3, Demographic Outliers

Demographic	Cluster Percentage	Total Sample Percentage
Age	80% Over 40	22% Over 40
Qualification	100% Graduate or Postgraduate	54% Graduate or Postgraduate
Work experience	100% Over 10 years WE	48% Over 10 years WE

Cluster 4 – description (12% of sample)

Figure 80: Creative Professionals - Cluster 4, Means

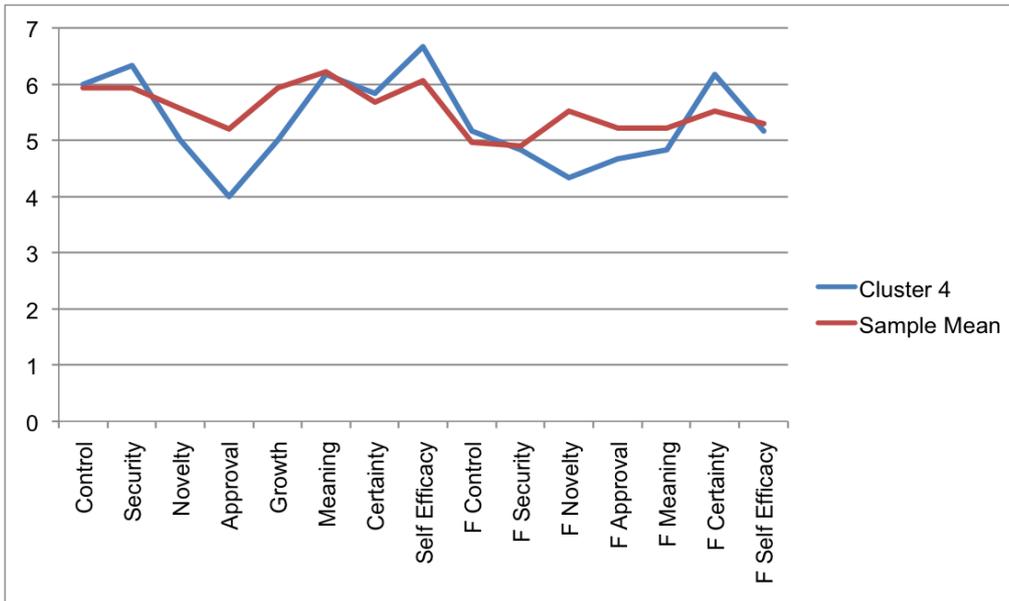


Figure 81: Creative Professionals - Cluster 4, Variances from Sample Means

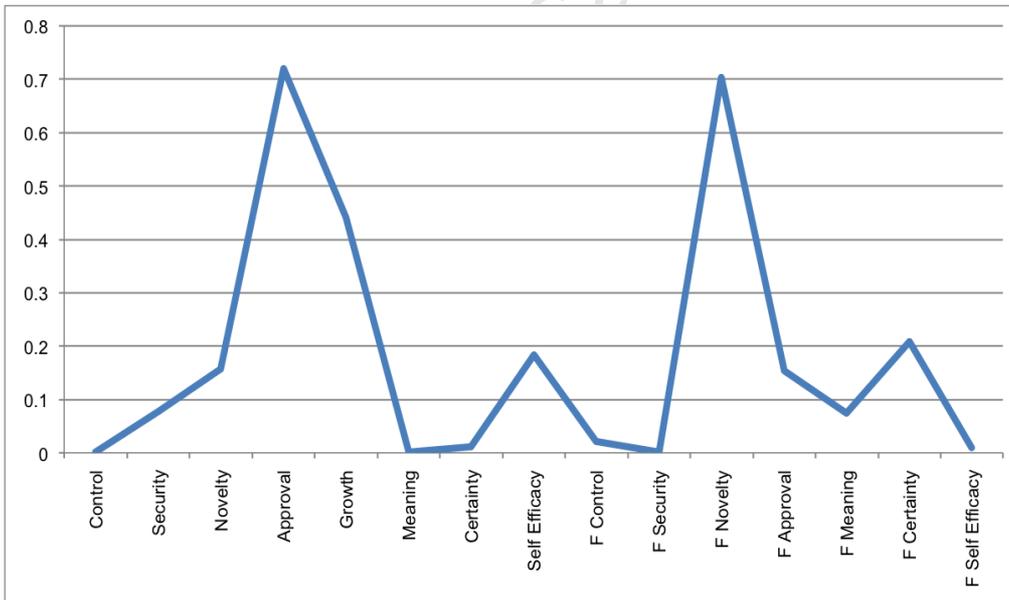


Table 36: Creative Professionals - Cluster 4, Demographic Outliers

Demographic	Cluster Percentage	Total Sample Percentage
Age	67% Over 30	46% Over 30

Cluster 5 – description (28% of sample)

Figure 82: Creative Professionals - Cluster 5, Means

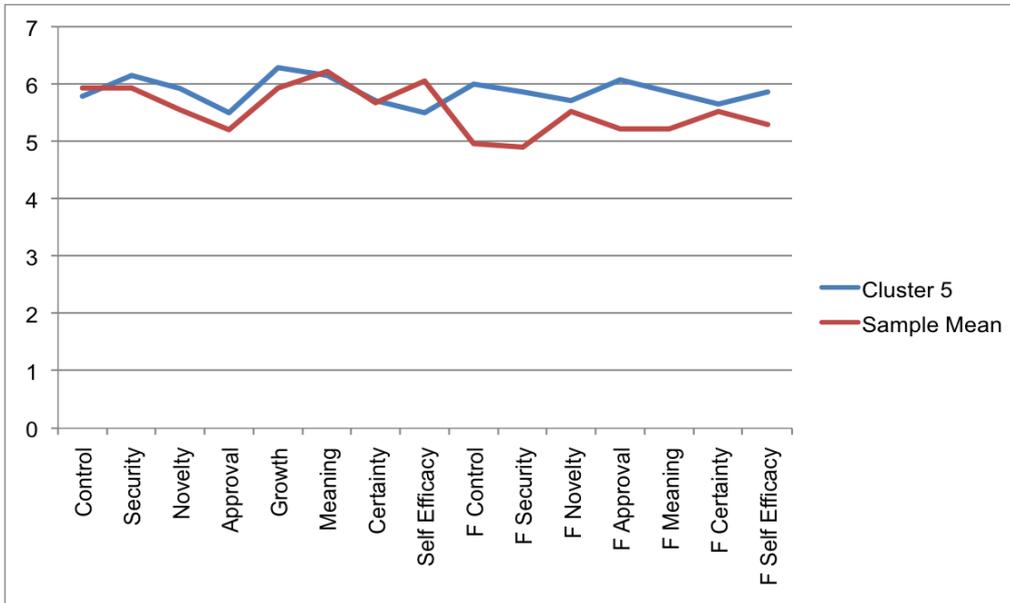


Figure 83: Creative Professionals - Cluster 5, Variances from Sample Means

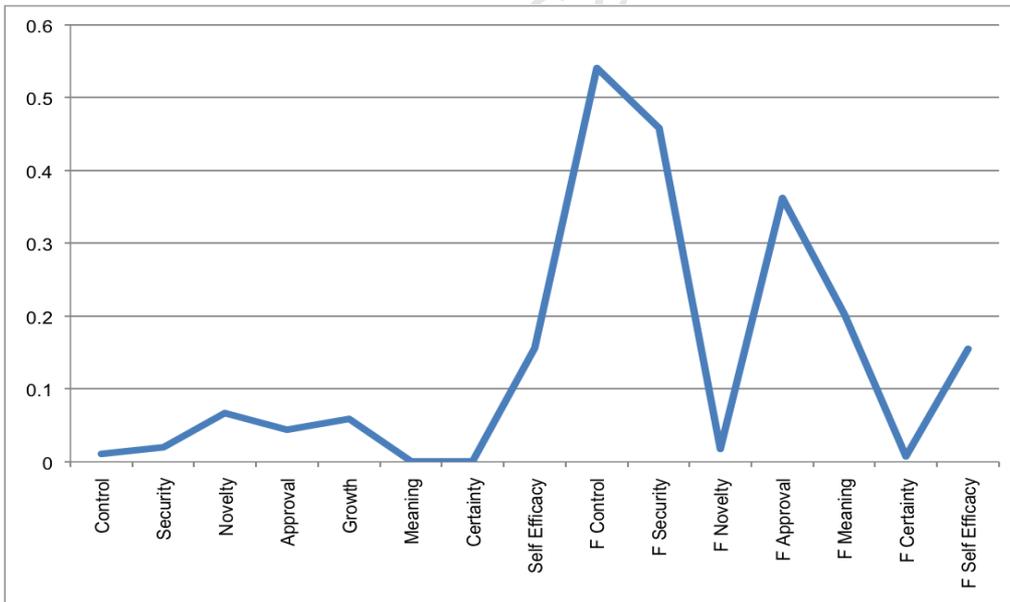


Table 37: Creative Professionals - Cluster 5, Demographic Outliers

Demographic	Cluster Percentage	Total Sample Percentage
n/a		

Cluster 6 – description (26% of sample)

Figure 84: Creative Professionals - Cluster 6, Means

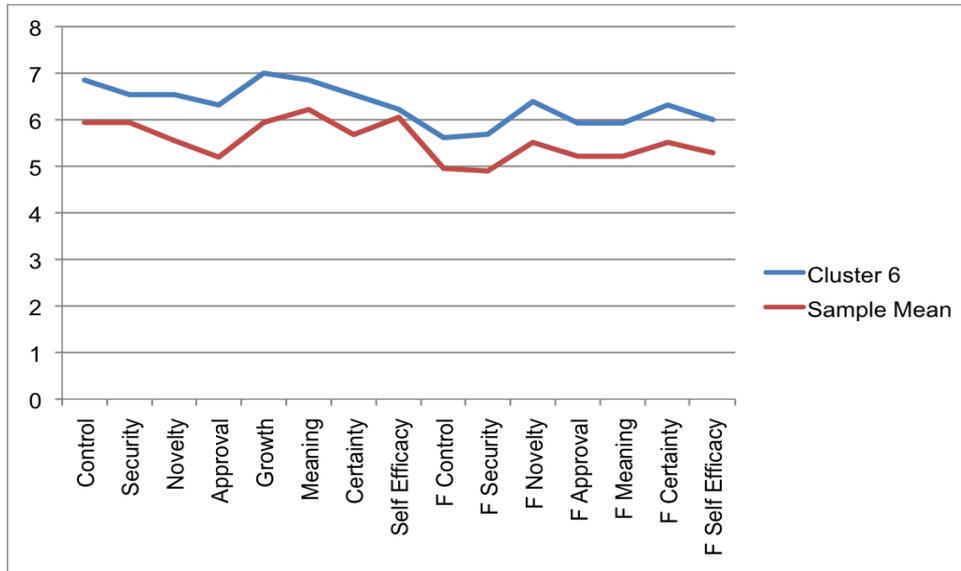


Figure 85: Creative Professionals - Cluster 6, Variances from Sample Means

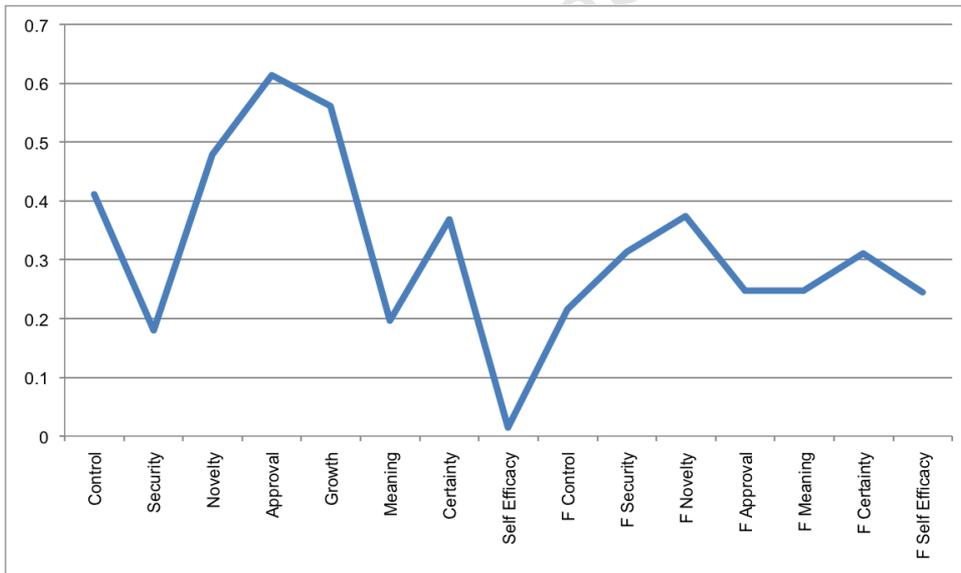


Table 38: Creative Professionals - Cluster 6, Demographic Outliers

Demographic	Cluster Percentage	Total Sample Percentage
n/a		

Appendix G

Field Work: Cluster Means, Variances and Demographic Outliers – Entrepreneurs

Figure 86: Entrepreneurs, Means

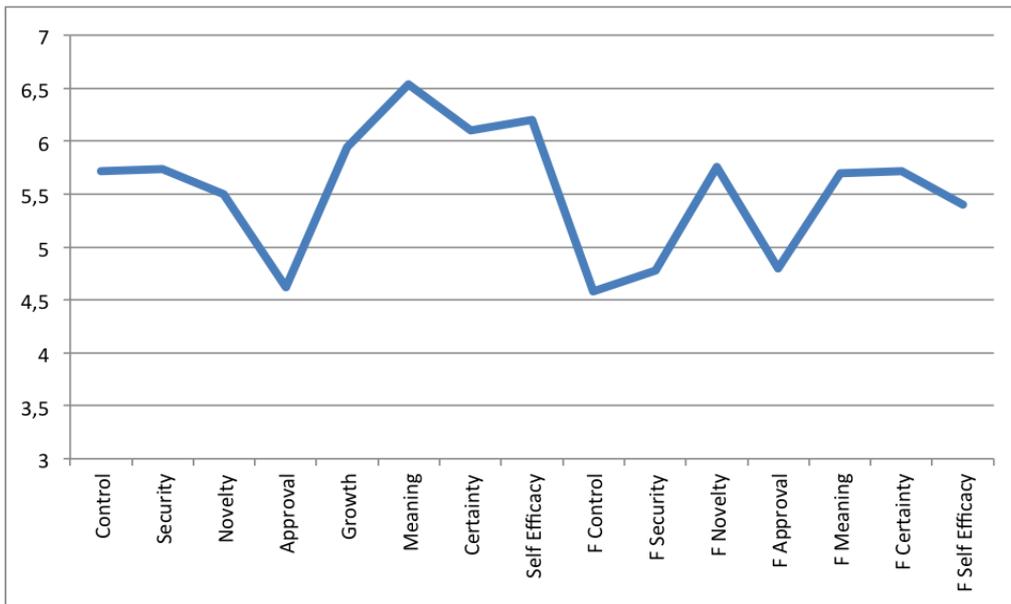
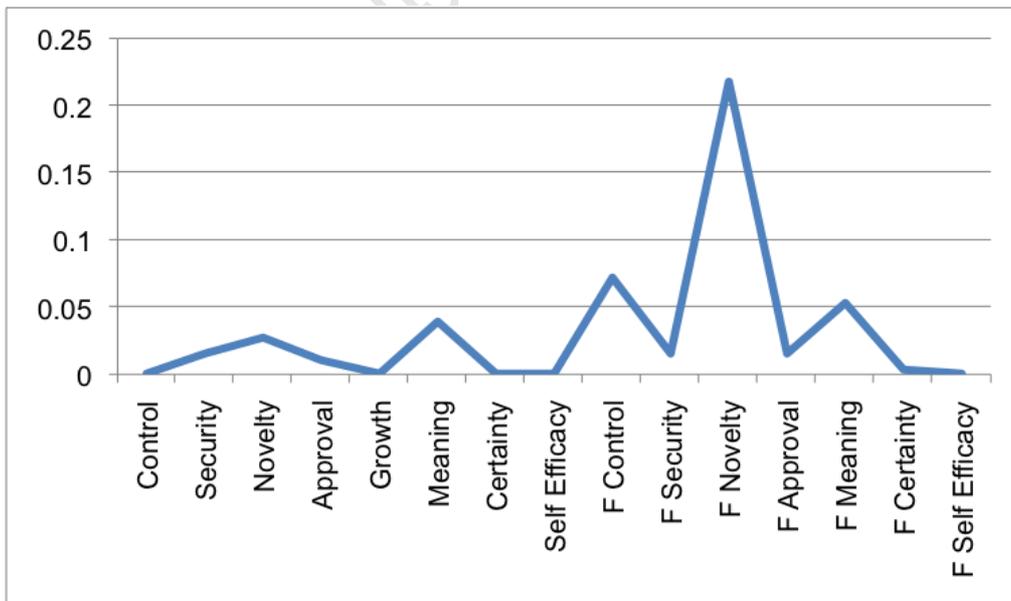


Figure 87: Entrepreneurs, Variances from Means



Cluster 1 - description (20% of sample)

Figure 88: Entrepreneurs - Cluster 1, Means

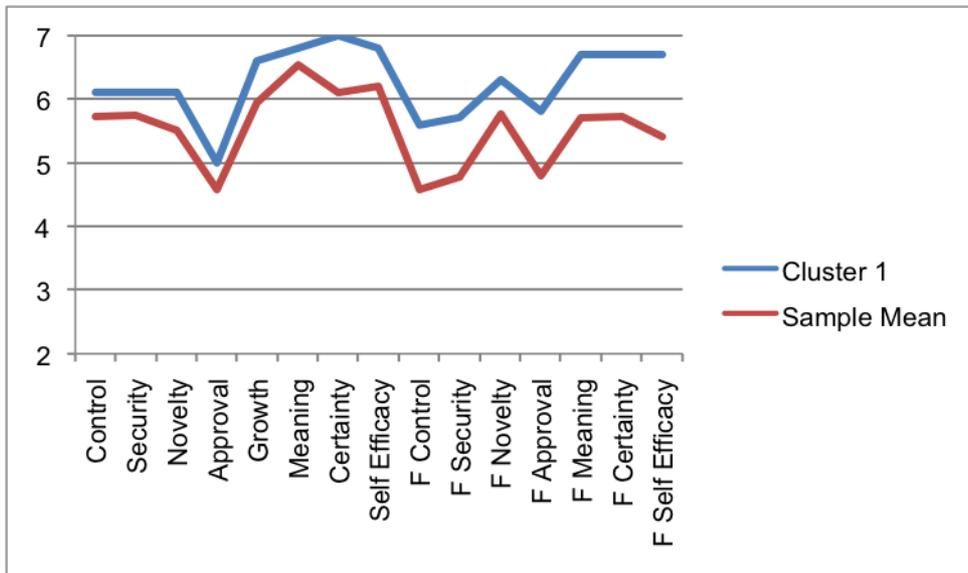


Figure 89: Entrepreneurs - Cluster 1, Variances from Sample Means

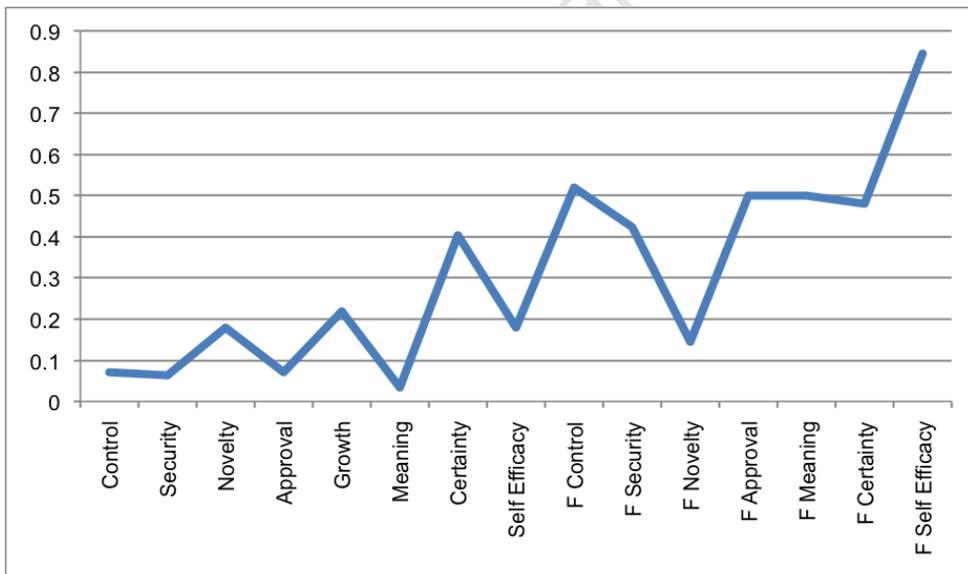


Table 39: Entrepreneurs - Cluster 1, Demographic Outliers

Demographic	Cluster Percentage	Total Sample Percentage
Work Experience	70% under 20 years	38% under 20 years

Cluster 2 – description (16% of sample)

Figure 90: Entrepreneurs - Cluster 2, Means

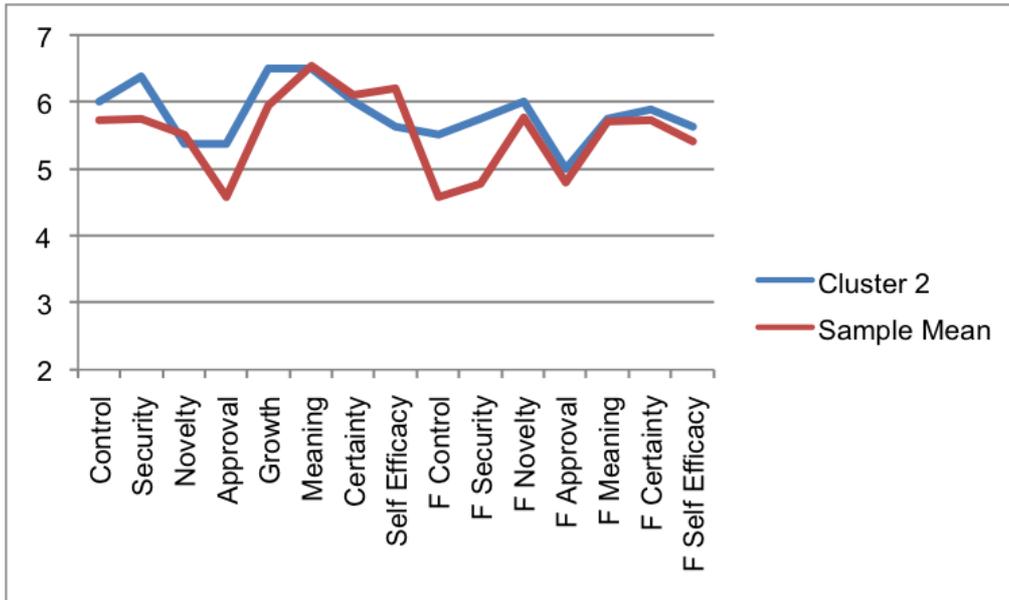


Figure 91: Entrepreneurs - Cluster 2, Variances from Sample Means

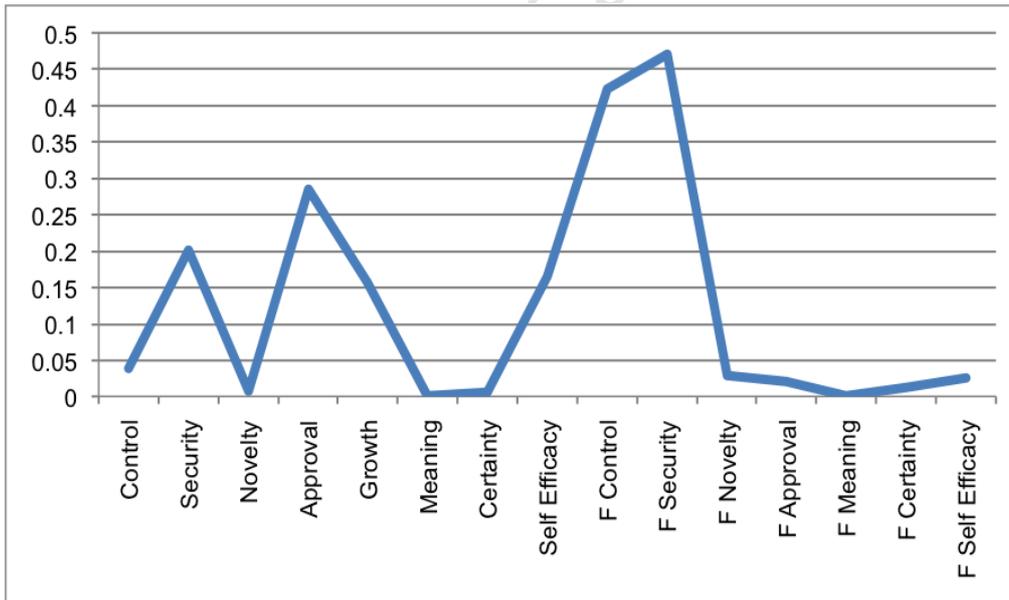


Table 40: Entrepreneurs - Cluster 2, Demographic Outliers

Demographic	Cluster Percentage	Total Sample Percentage
n/a		

Cluster 3 – description (26% of sample)

Figure 92: Entrepreneurs - Cluster 3, Means

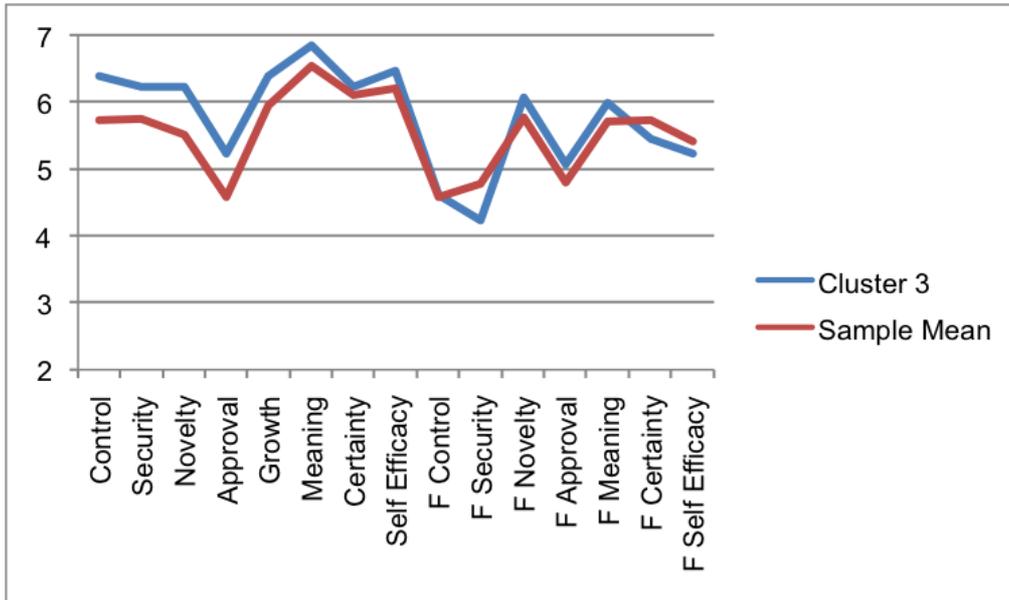


Figure 93: Entrepreneurs - Cluster 3, Variances from Sample Means

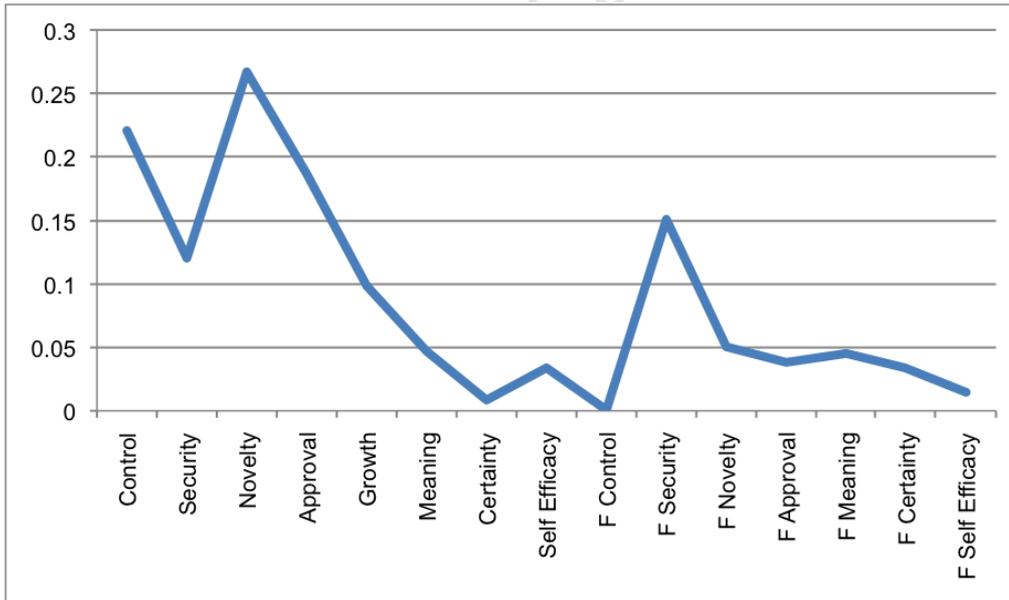


Table 41: Entrepreneurs - Cluster 3, Demographic Outliers

Demographic	Cluster Percentage	Total Sample Percentage
n/a		

Cluster 4 – description (14% of sample)

Figure 94: Entrepreneurs - Cluster 4, Means

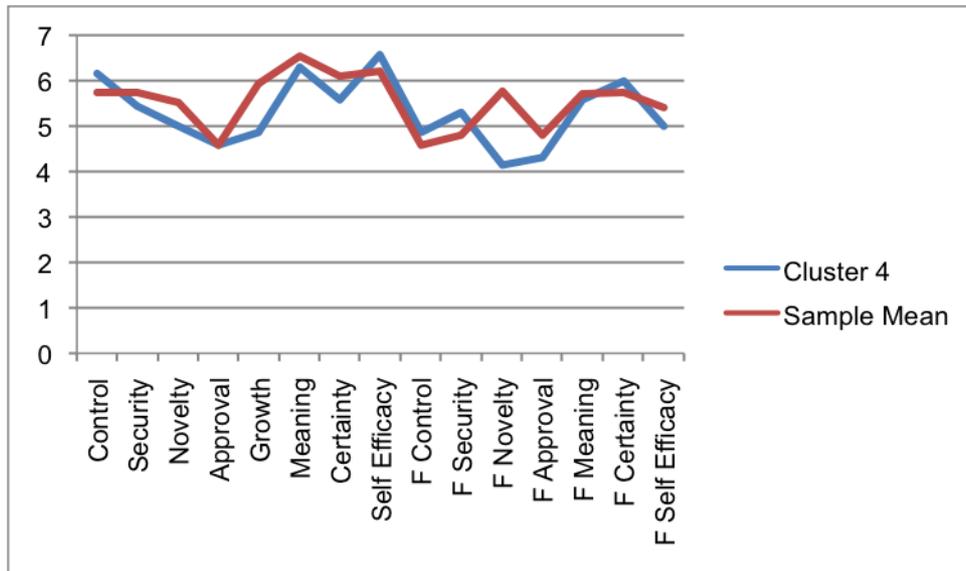


Figure 95: Entrepreneurs - Cluster 4, Variances from Sample Means

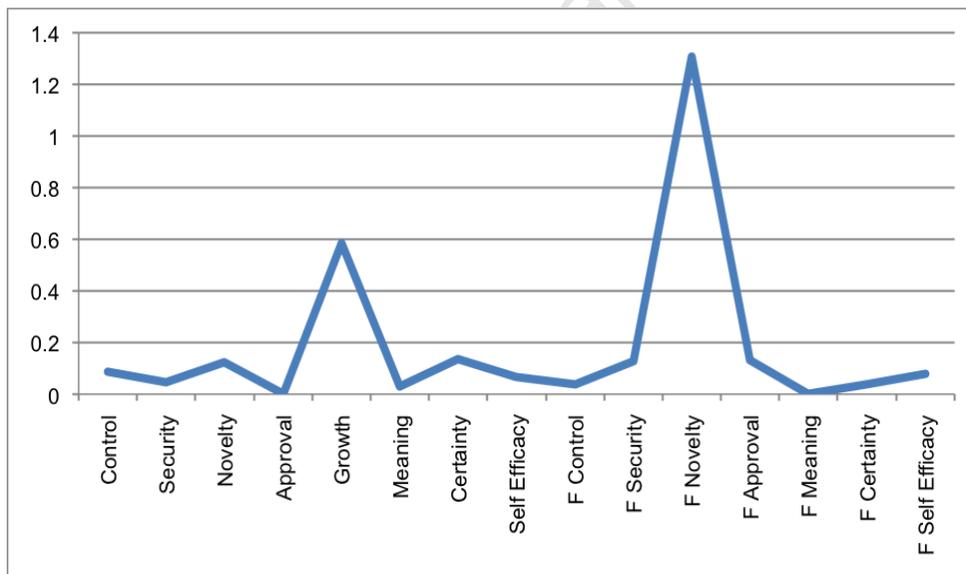


Table 42: Entrepreneurs - Cluster 4, Demographic Outliers

Demographic	Cluster Percentage	Total Sample Percentage
Age	100% over 40	68% over 40
Qualification	86% postgraduate	46% postgraduate
Income	76% over 410,000	46% over 410,000

Cluster 5 – description (14% of sample)

Figure 96: Entrepreneurs - Cluster 5, Means

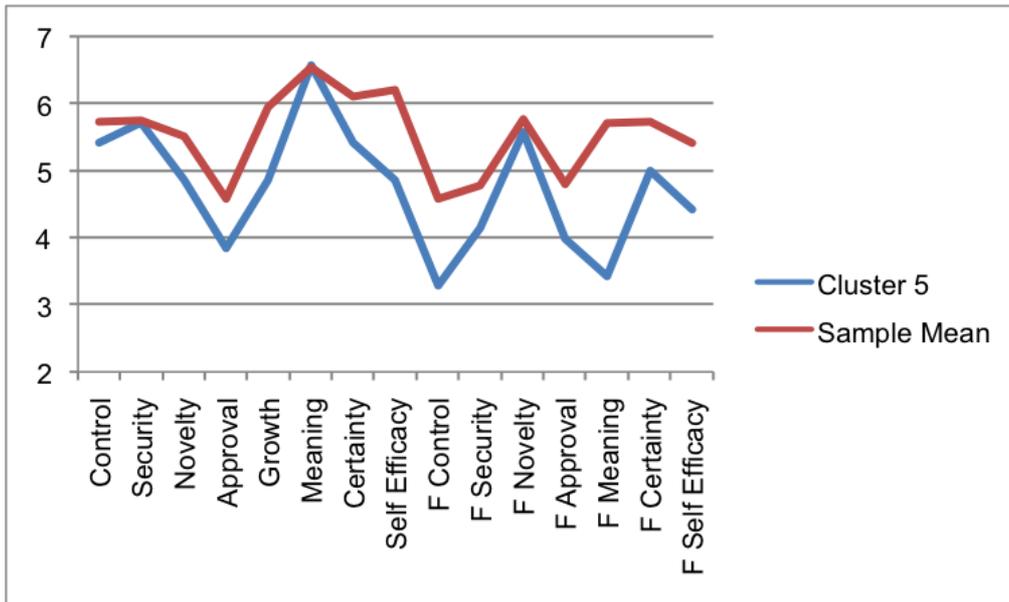


Figure 97: Cluster 5, Entrepreneurs – Variances from Sample Means

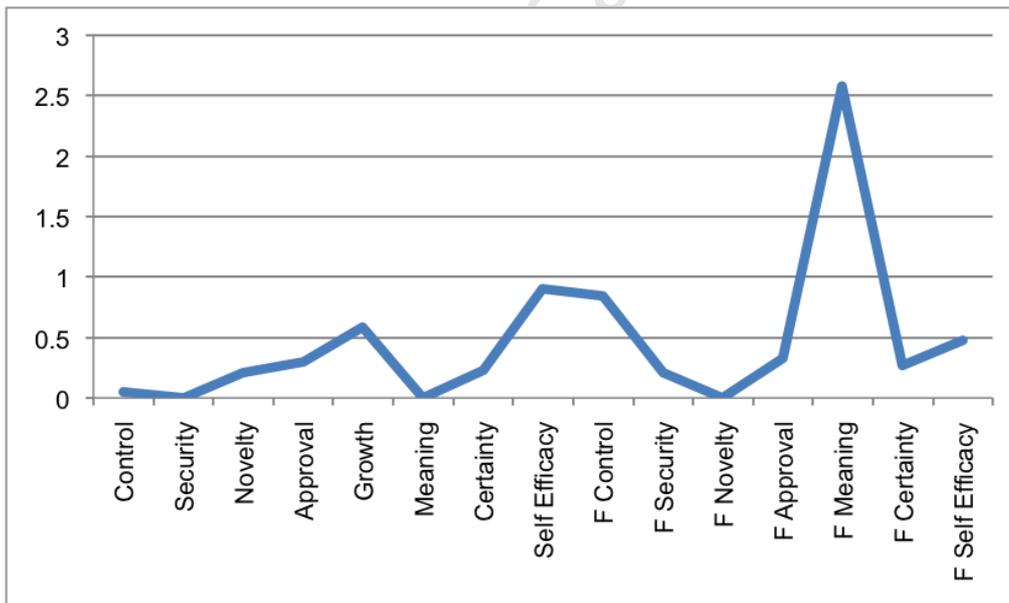


Table 43: Entrepreneurs - Cluster 5, Demographic Outliers

Demographic	Cluster Percentage	Total Sample Percentage
n/a		

Cluster 6 – description (10% of sample)

Figure 98: Entrepreneurs - Cluster 6, Means

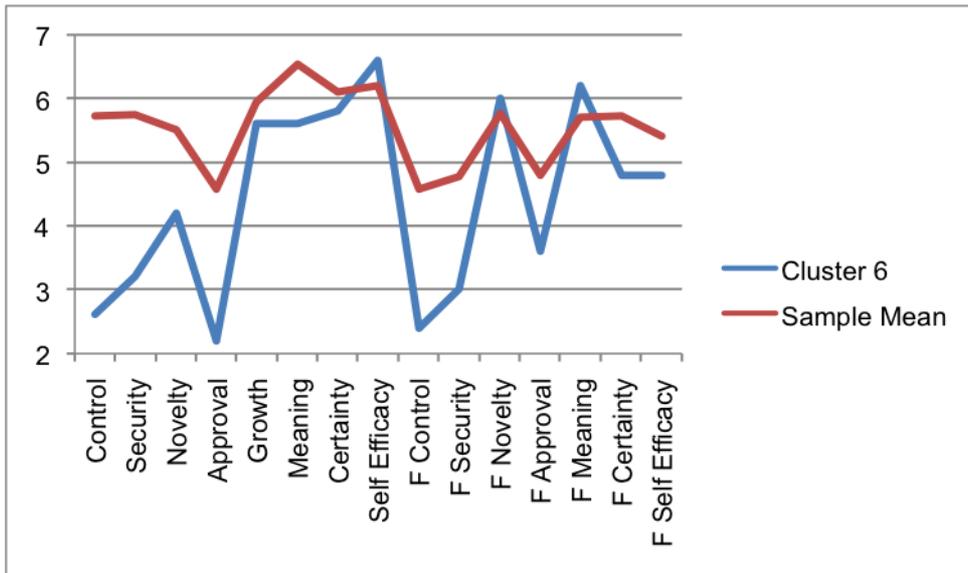


Figure 99: Entrepreneurs - Cluster 6, Variances from Sample Means

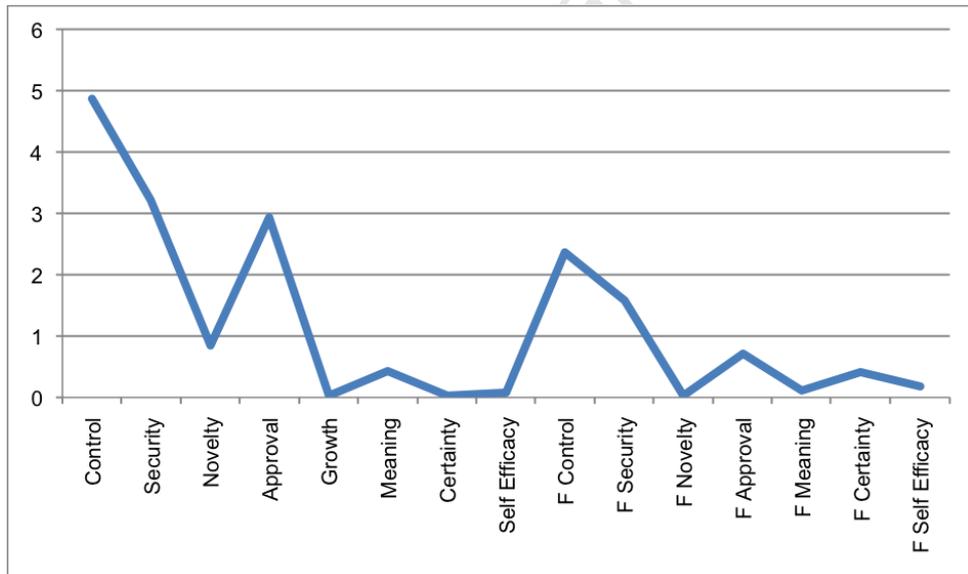


Table 44: Entrepreneurs - Cluster 6, Demographic Outliers

Demographic	Cluster Percentage	Total Sample Percentage
Income	80% over 410,000	46% over 410,000

Appendix H

Field Work: Cluster Means, Variances and Demographic Outliers – Business Managers

Figure 100: Business Managers, Means

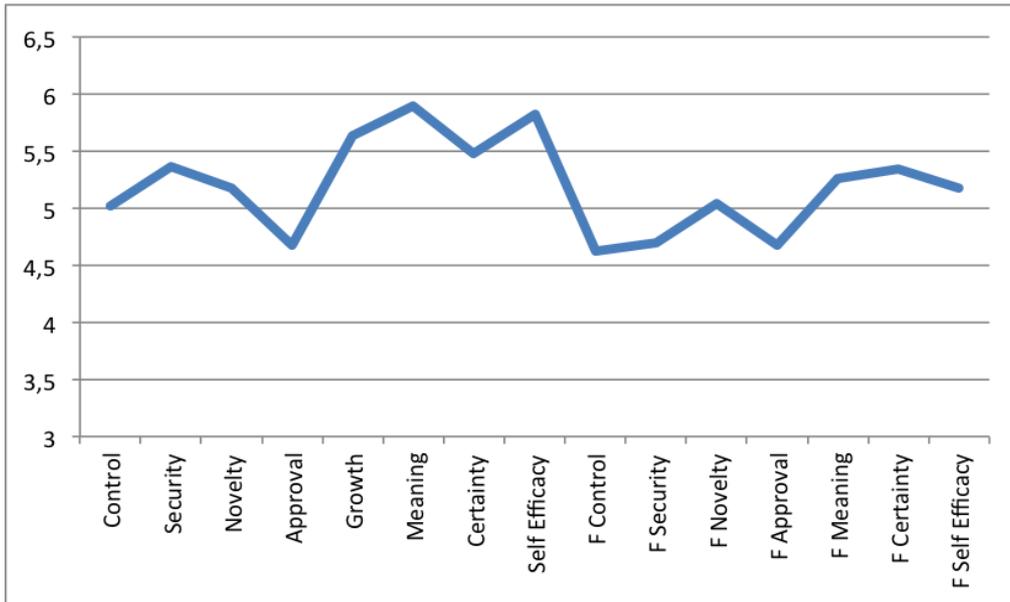
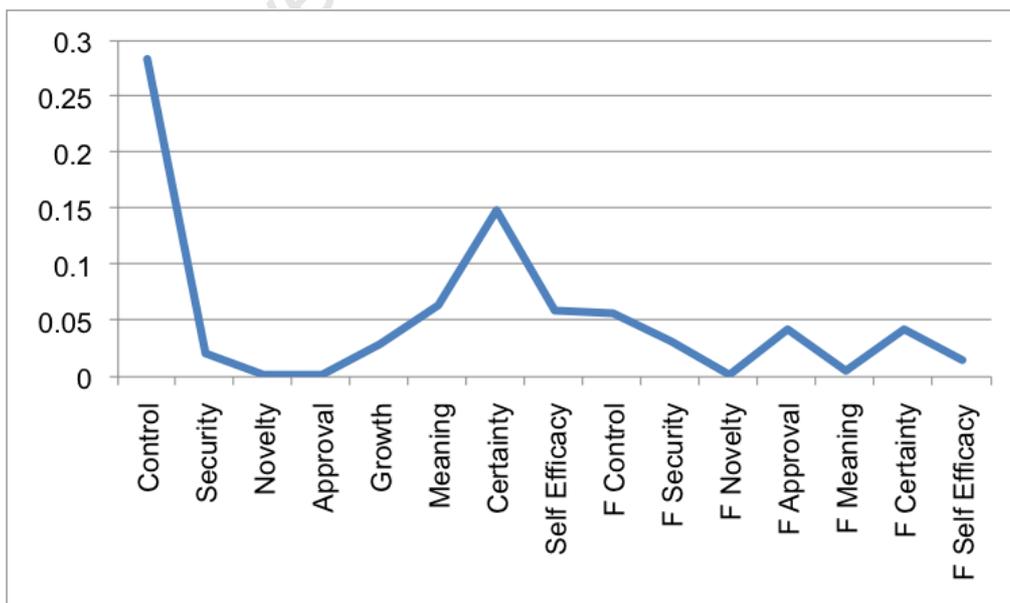


Figure 101: Business Managers, Variances from Sample Means



Cluster 1 - description (24% of sample)

Figure 102: Business Managers - Cluster 1, Means

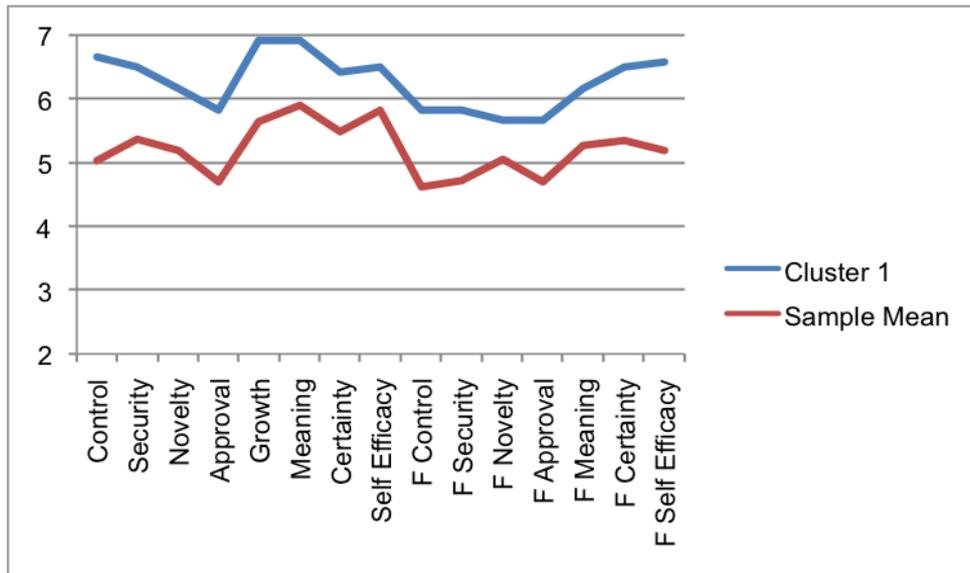


Figure 103: Entrepreneurs - Cluster 1, Variances from Sample Means

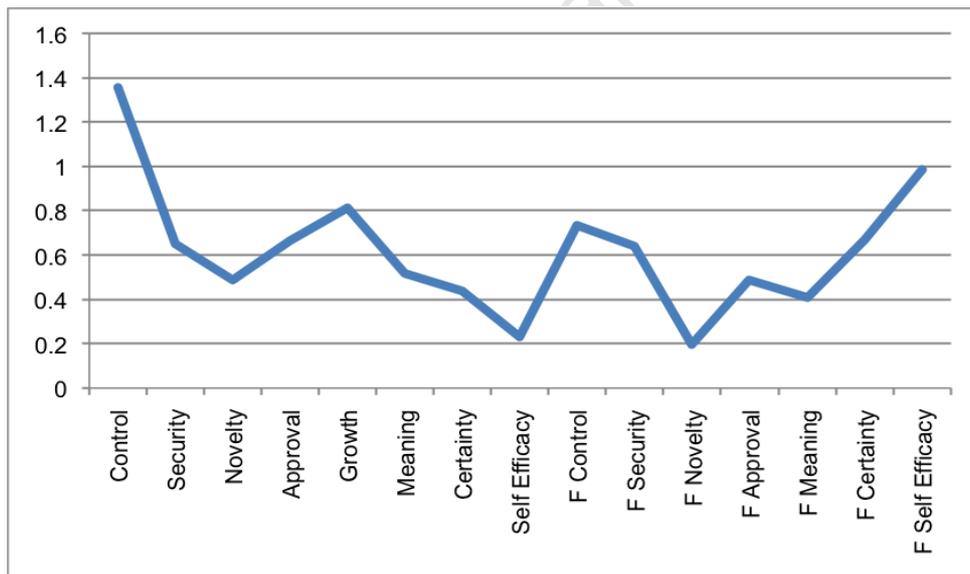


Table 45: Business Managers - Cluster 1, Demographic Outliers

Demographic	Cluster Percentage	Total Sample Percentage
Race	58% African / Black	24% African / Black

Cluster 2 (22% of sample)

Figure 104: Business Managers - Cluster 2, Means

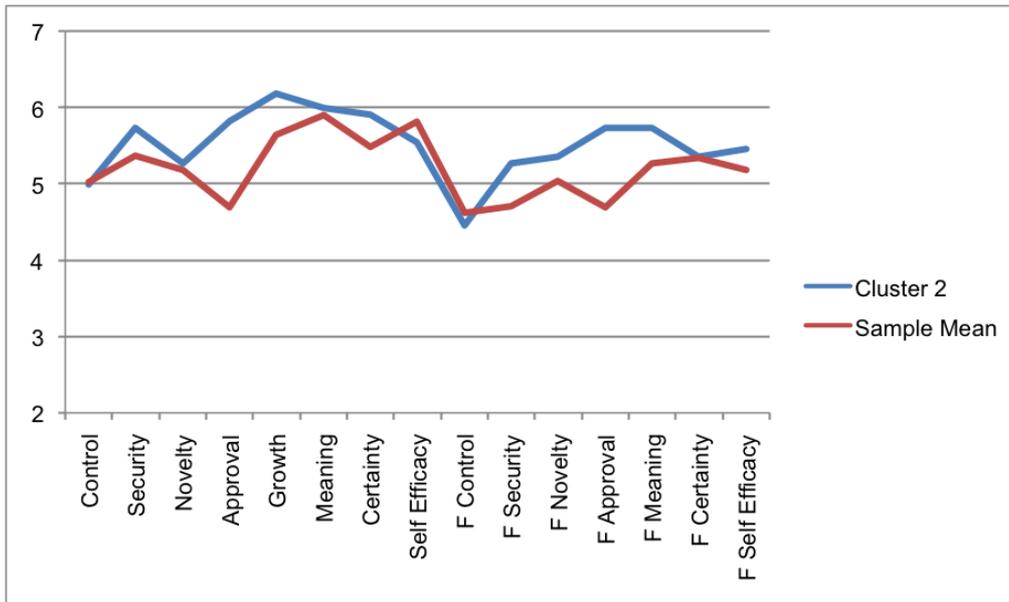


Figure 105: Business Managers - Cluster 2, Variances from Sample Means

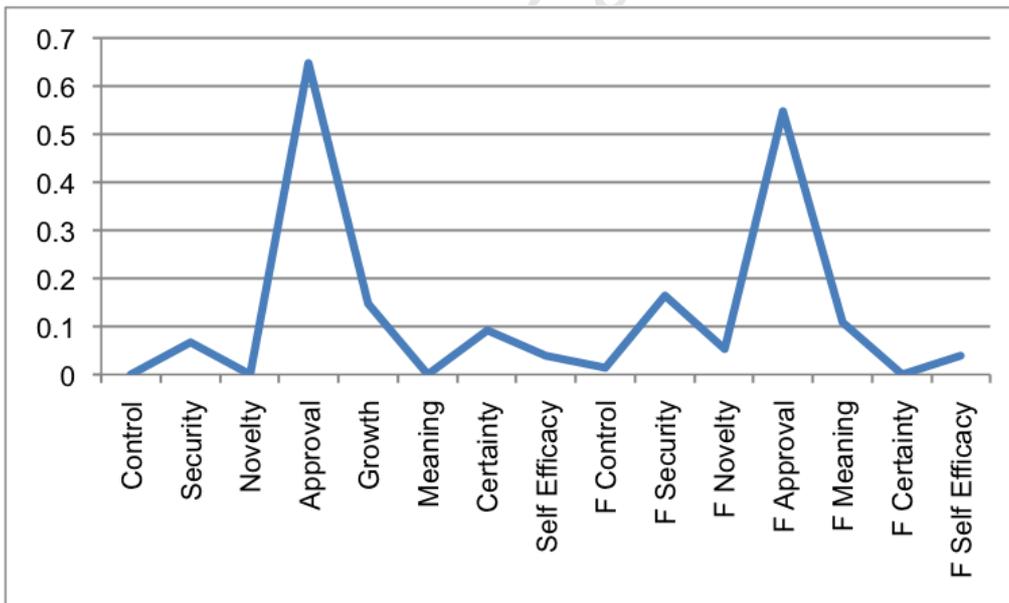


Table 46: Business Managers - Cluster 2, Demographic Outliers

Demographic	Cluster Percentage	Total Sample Percentage
n/a		

Cluster 3 - description (24% of sample)

Figure 106: Business Managers - Cluster 3, Means

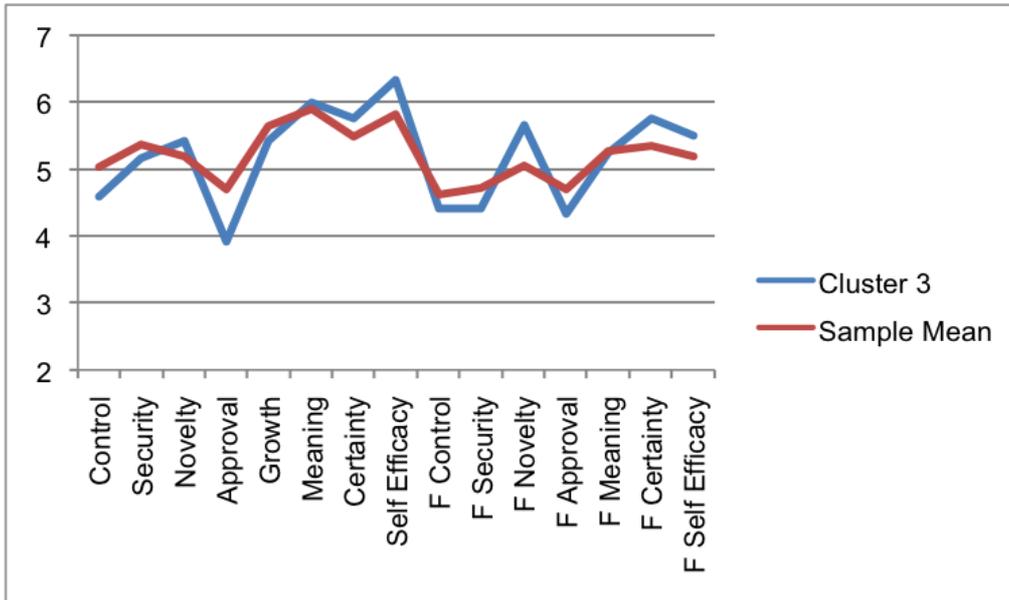


Figure 107: Business Managers - Cluster 3, Variances from Sample Means

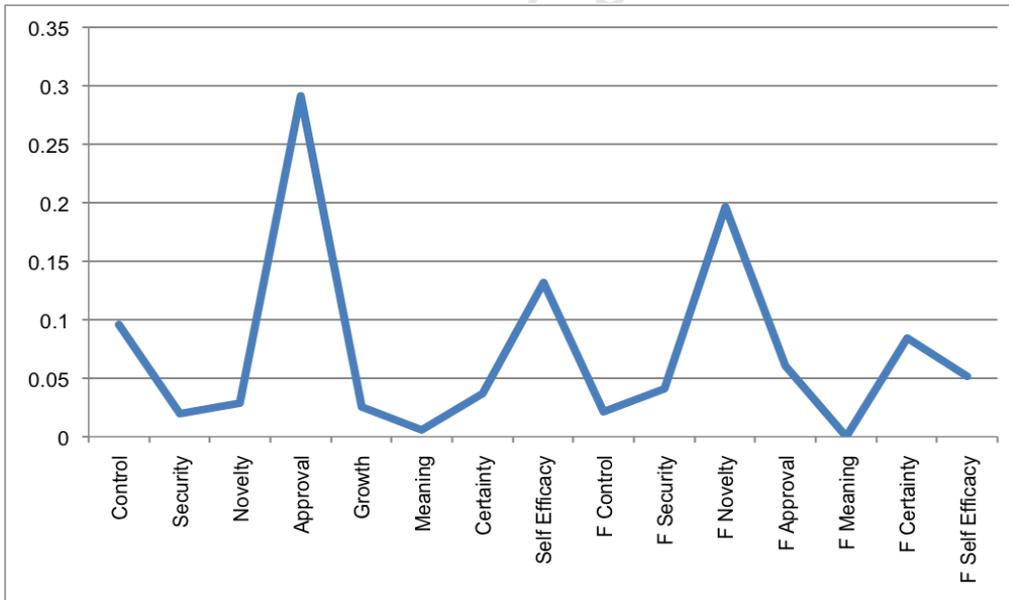


Table 47: Business Managers - Cluster 3, Demographic Outliers

Demographic	Cluster Percentage	Total Sample Percentage
n/a		

Cluster 4 – description (16% of sample)

Figure 108: Business Managers - Cluster 4, Means

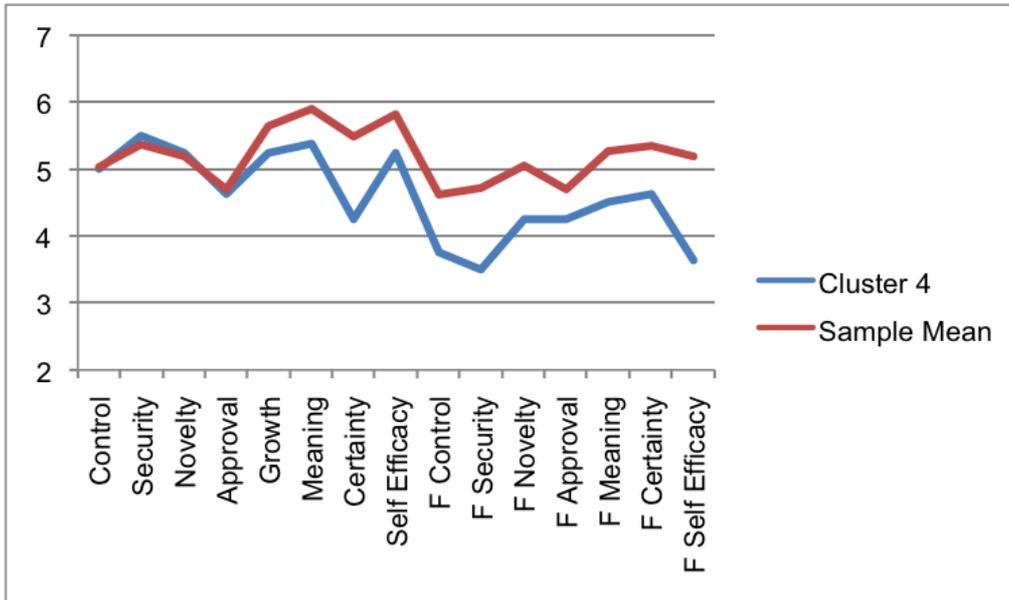


Figure 109: Business Managers - Cluster 4, Variances from Sample Means

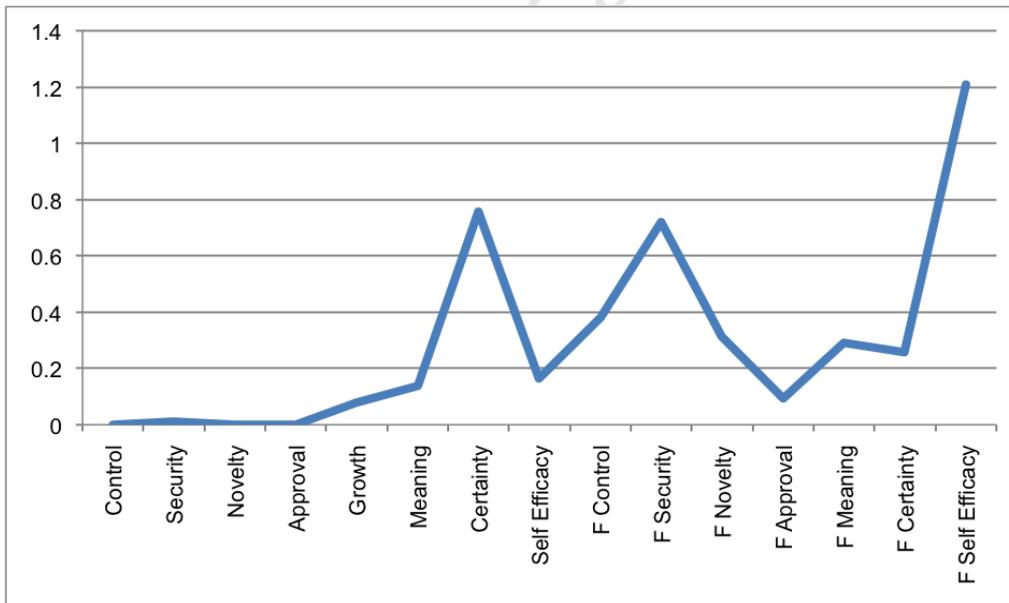


Table 48: Business Managers - Cluster 4, Demographic Outliers

Demographic	Cluster Percentage	Total Sample Percentage
n/a		

Cluster 5 – description (8% of sample)

Figure 110: Business Managers - Cluster 5, Means

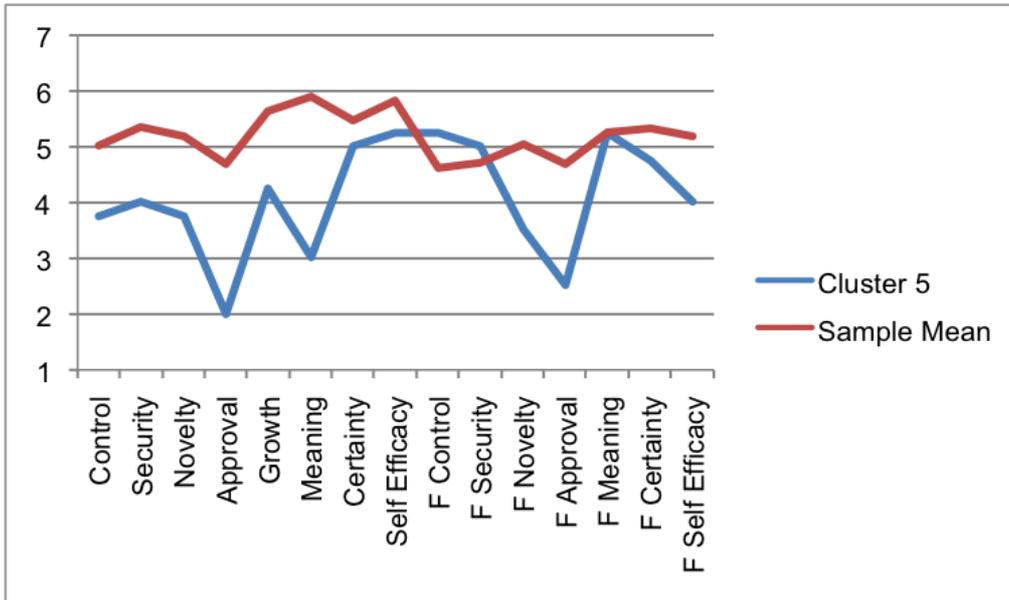


Figure 111: Business Managers - Cluster 5, Variances from Sample Means

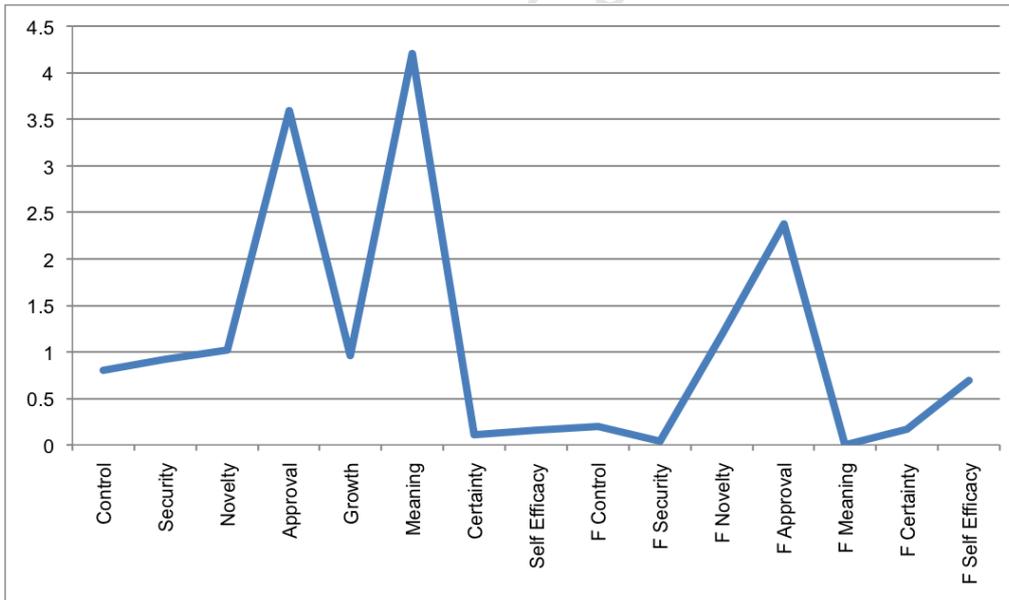


Table 49: Business Managers - Cluster 5, Demographic Outliers

Demographic	Cluster Percentage	Total Sample Percentage
n/a		

Cluster 6 - description (6% of sample)

Figure 112: Business Managers - Cluster 6, Means

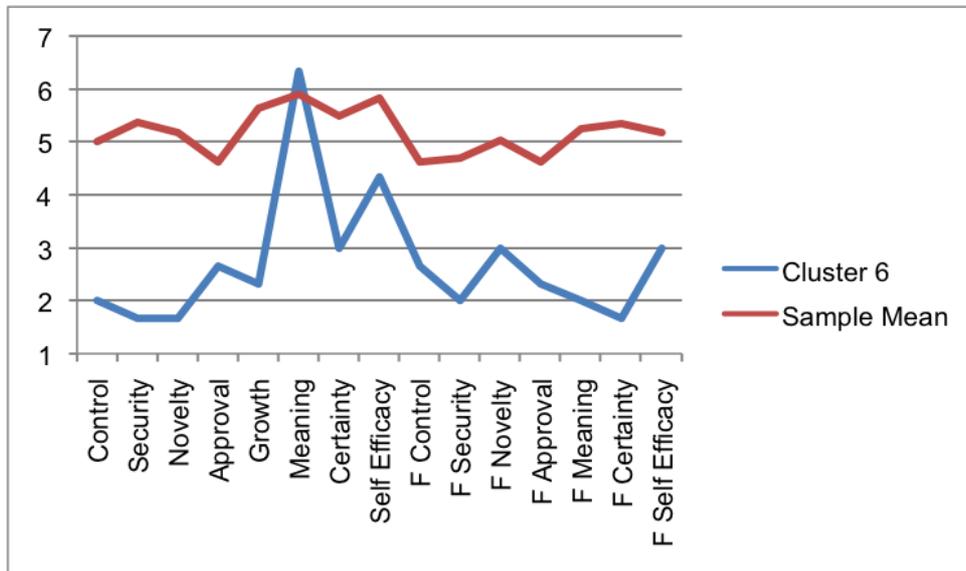


Figure 113: Business Managers - Cluster 6, Variances from Sample Means

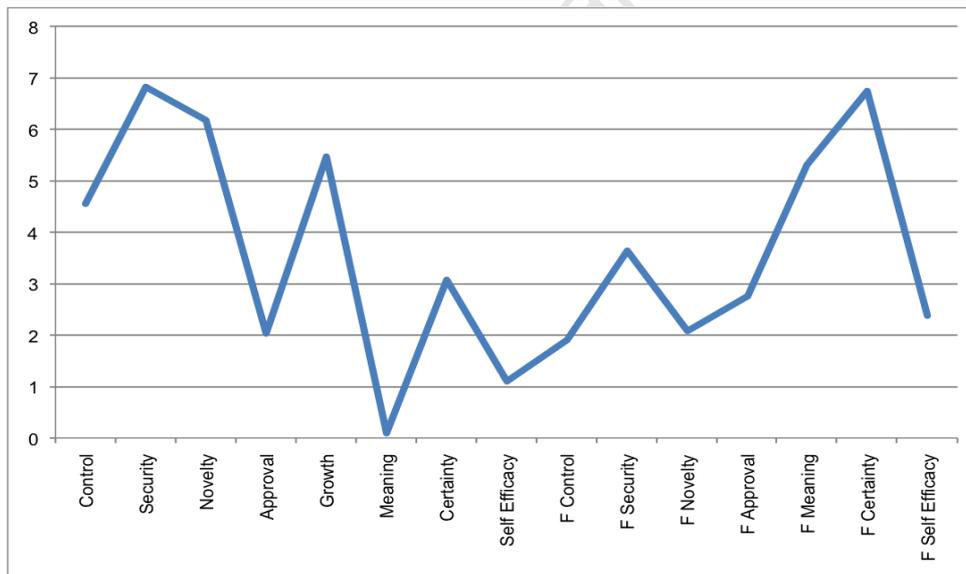


Table 50: Business Managers - Cluster 6, Demographic Outliers

Demographic	Cluster Percentage	Total Sample Percentage
Age	67% Over 40 years	36% Over 40 years
Work experience	67% Over 20 years	30% Over 20 years

Appendix I

Field Work: Description of Motivation Variables by Demographic Qualities

Figure 114: Means by Age Quartile (Q1 = youngest)

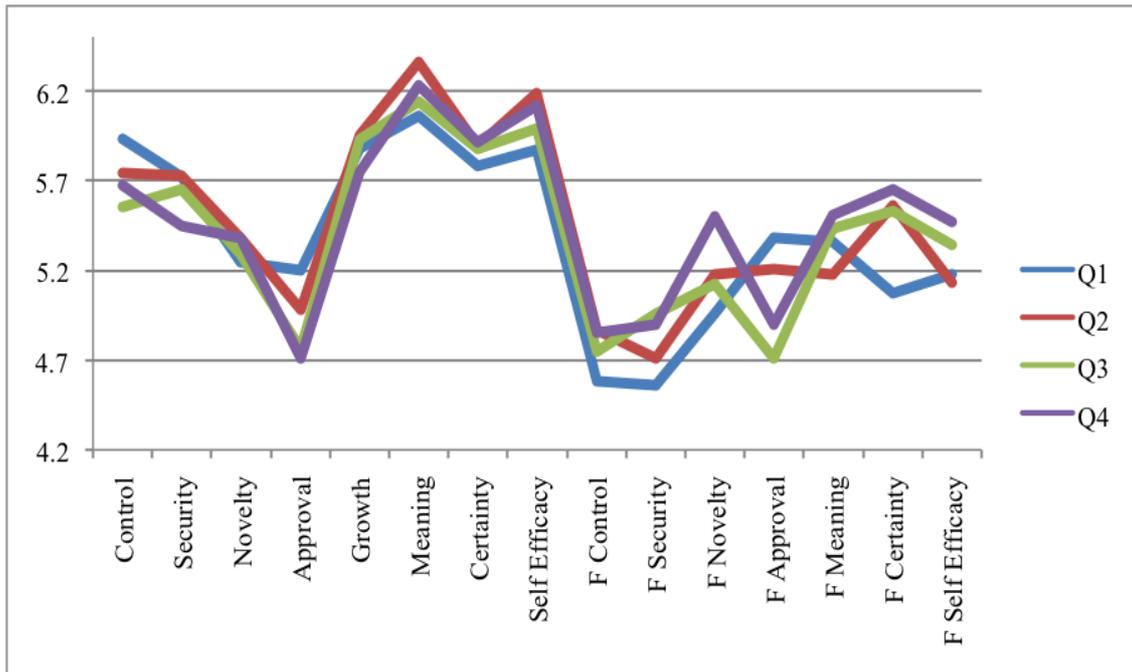


Figure 115: Variances by Age Quartile

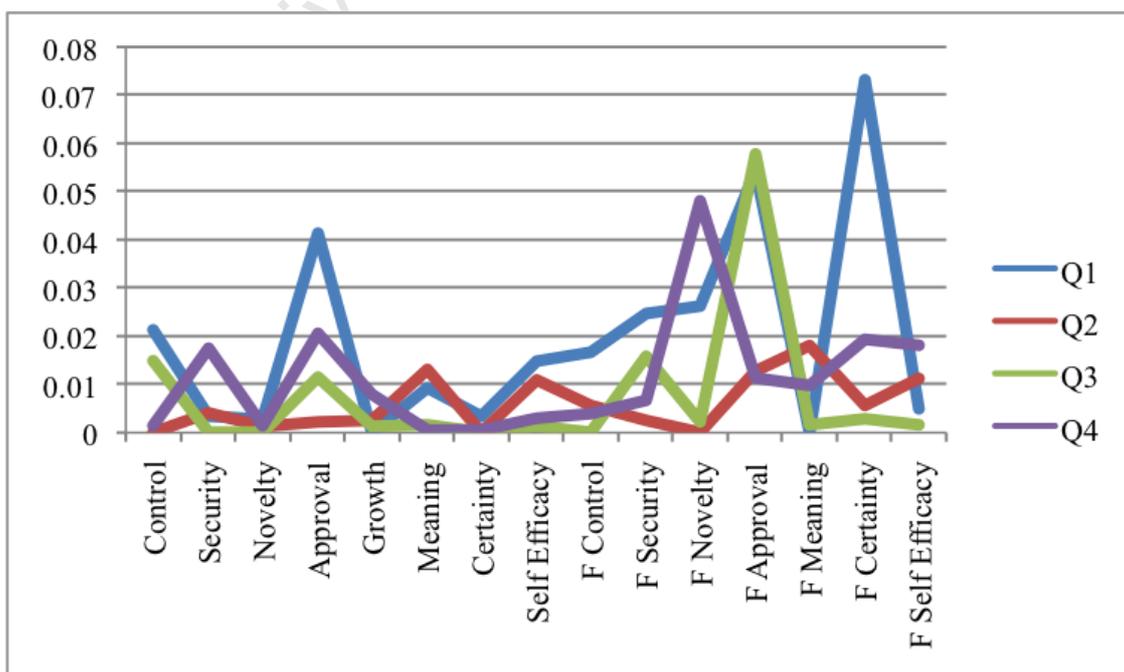


Figure 116: Means by Gender

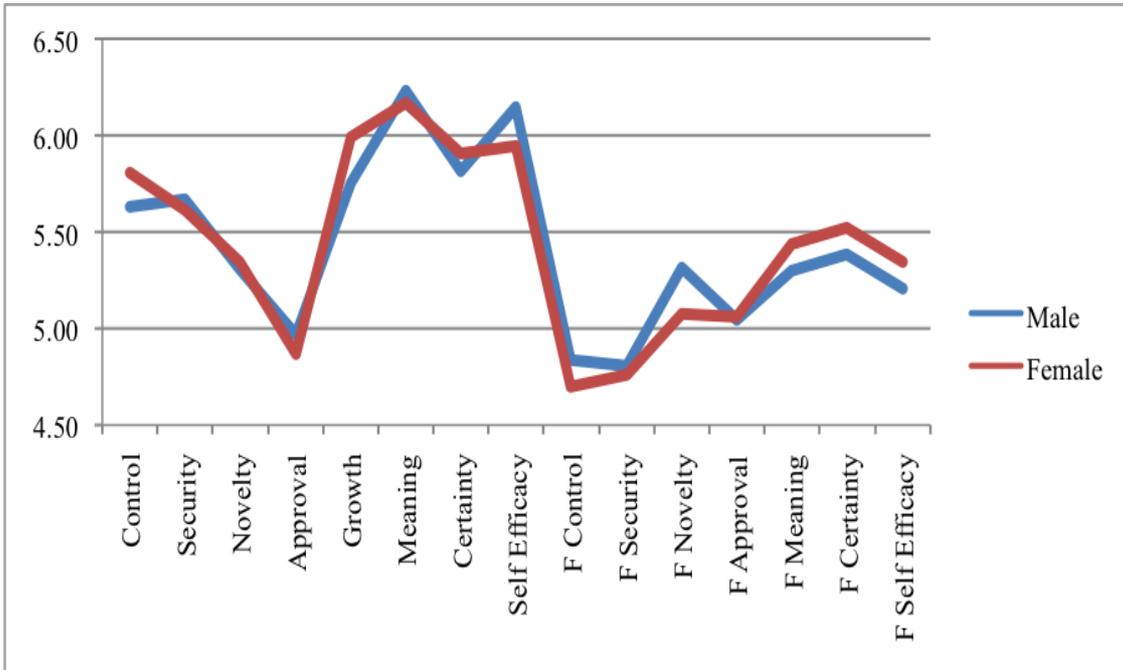


Figure 117: Variances by Gender

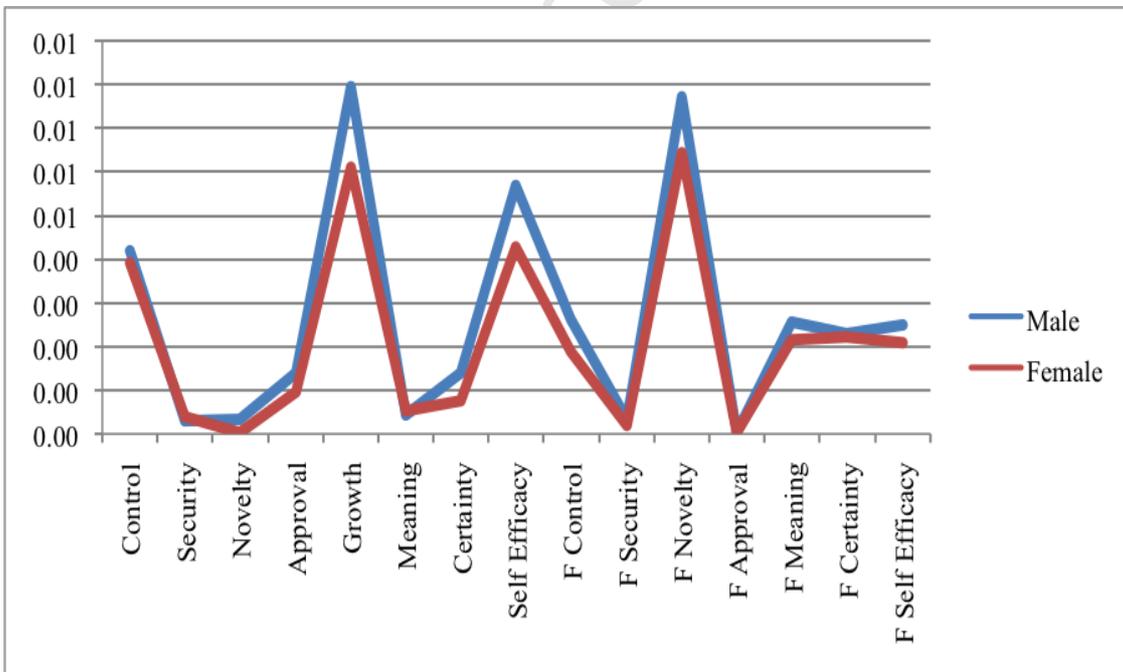


Figure 118: Means by Race Type

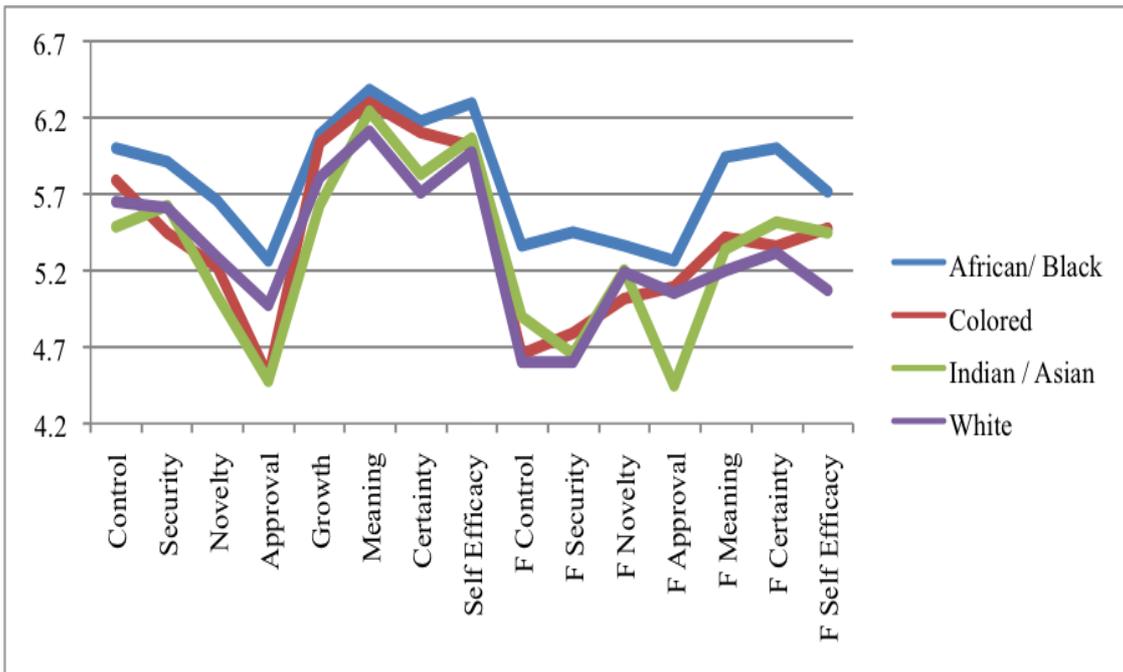


Figure 119: Variances by Race Type

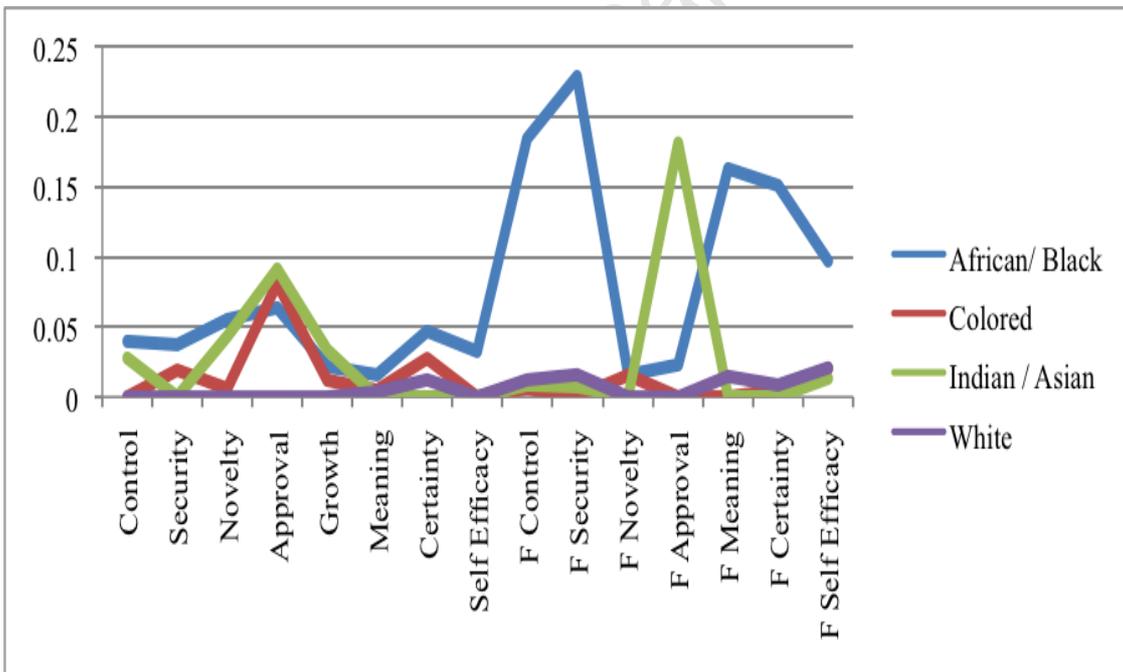


Figure 120: Means by Qualification

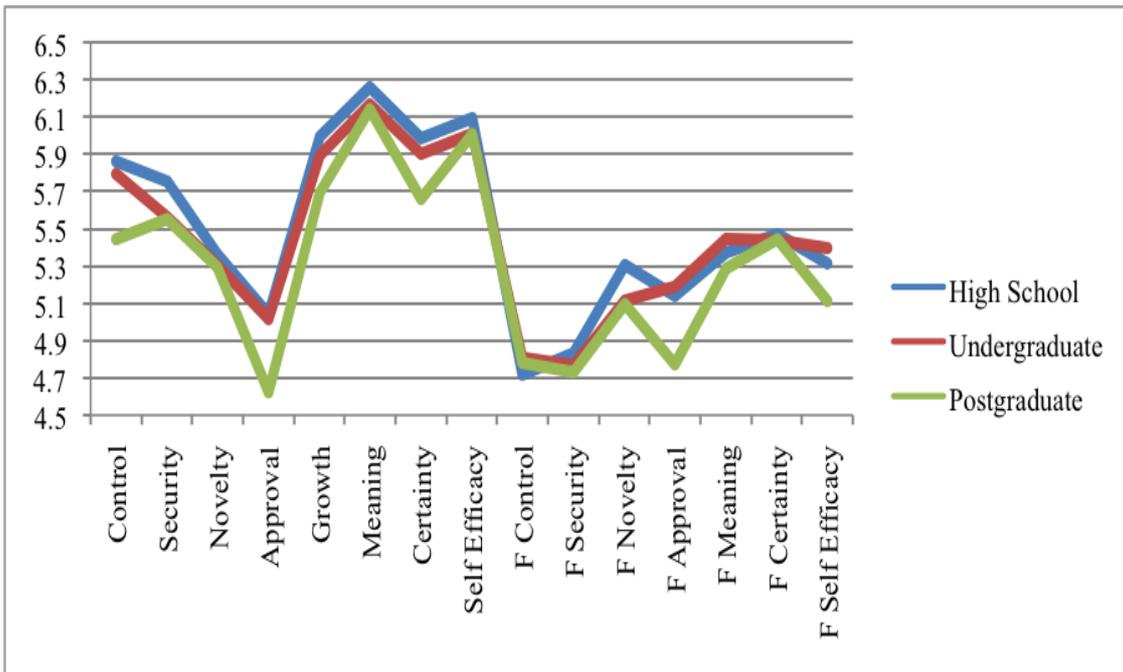


Figure 121: Variances by Qualification

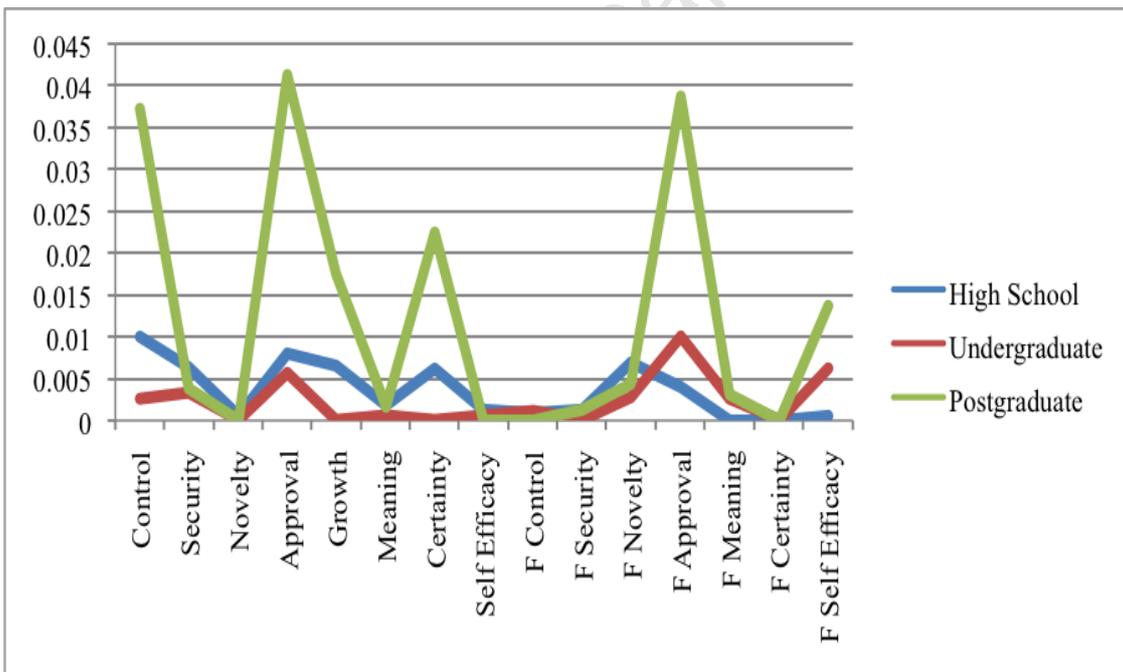


Figure 122: Means by Income

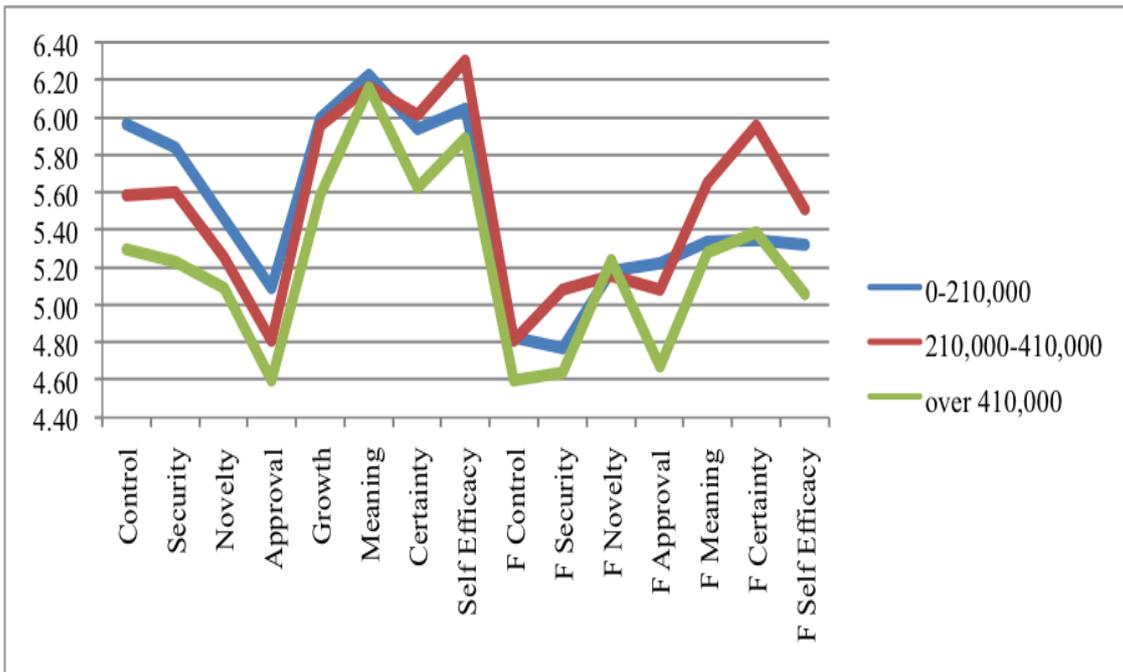


Figure 123: Variances by Income

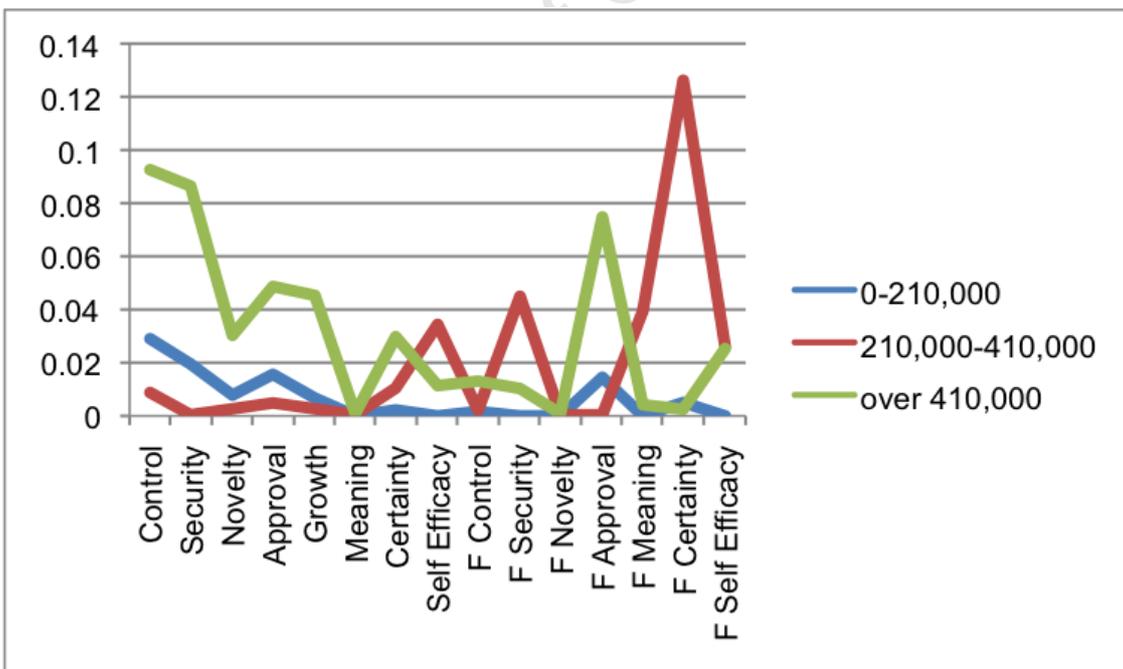


Figure 124: Means by Work Experience Quartile

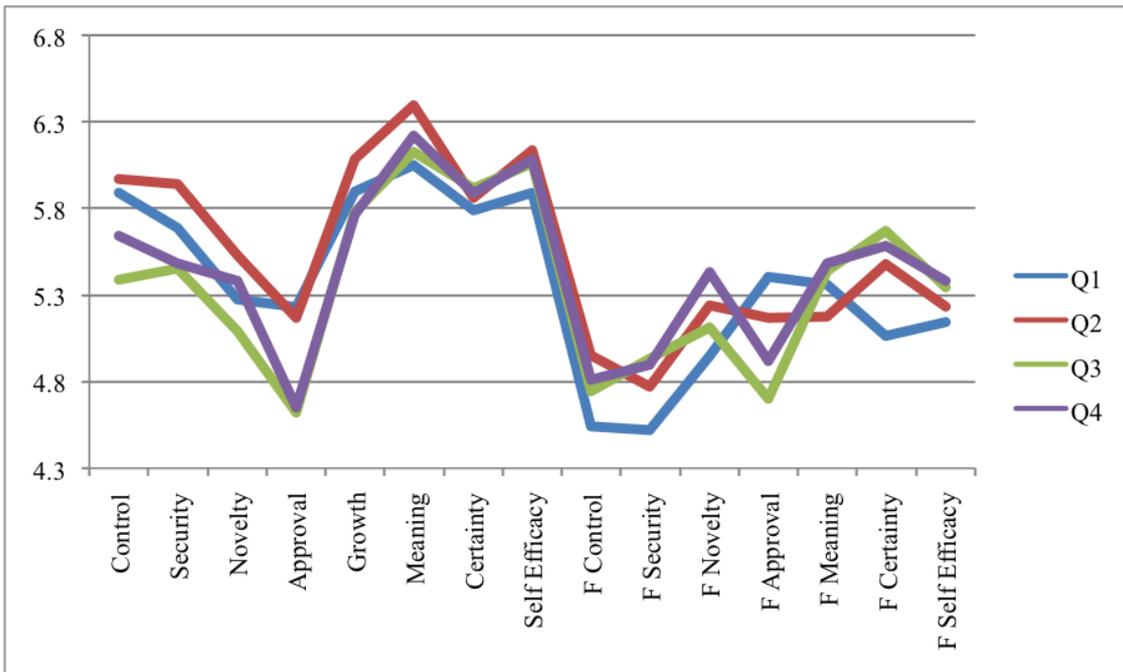
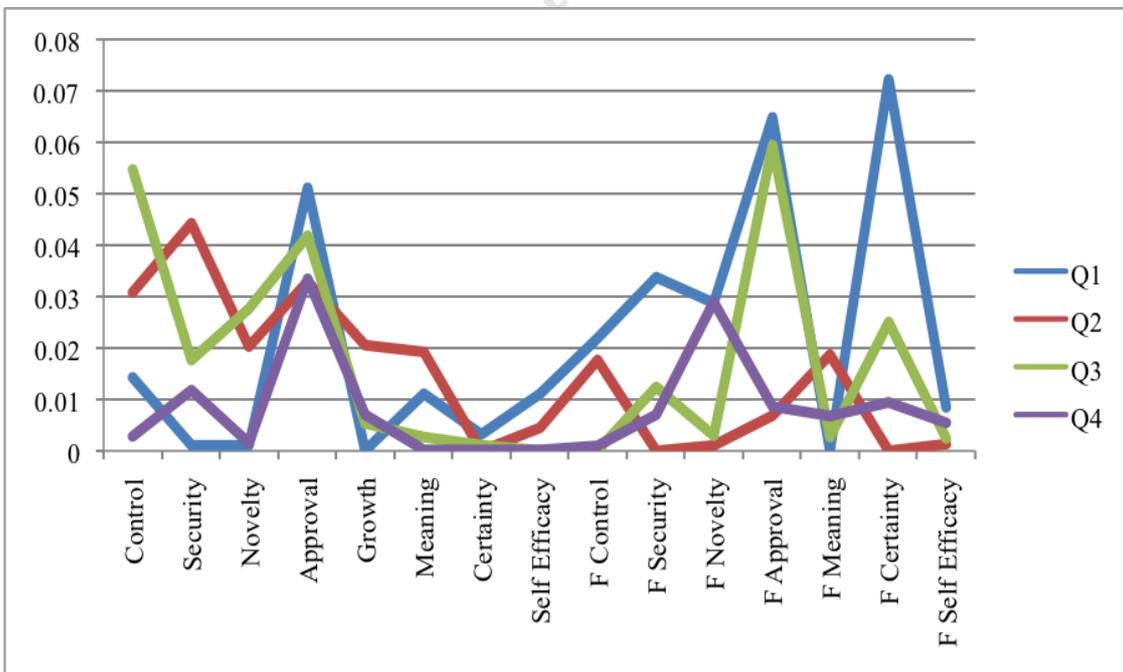


Figure 125: Variances by Work Experience Quartile



Appendix J

Field Work: Description of Demographic Qualities of Data

Figure 126: Age, All Data

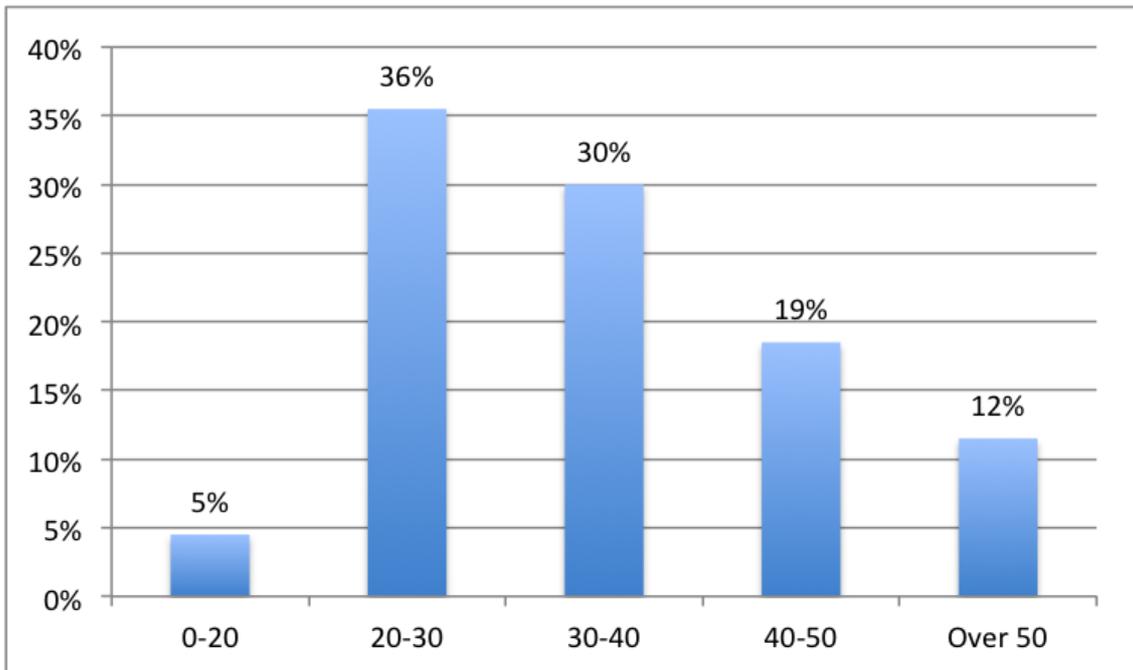


Figure 127: Age by Career Type

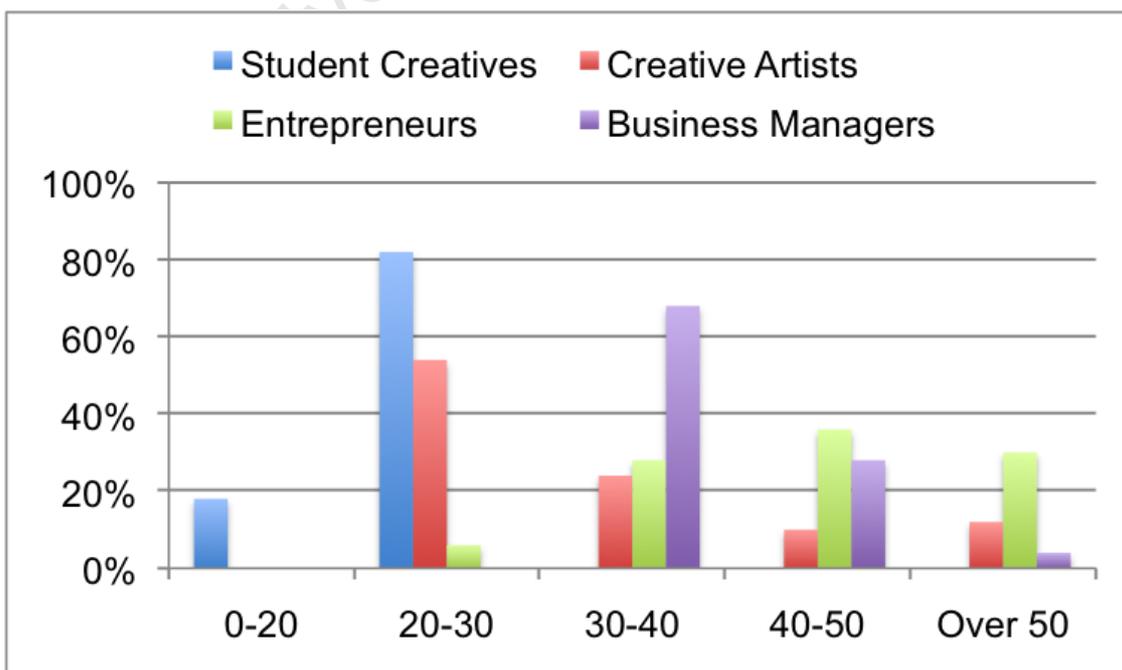


Figure 128: Gender, All Data

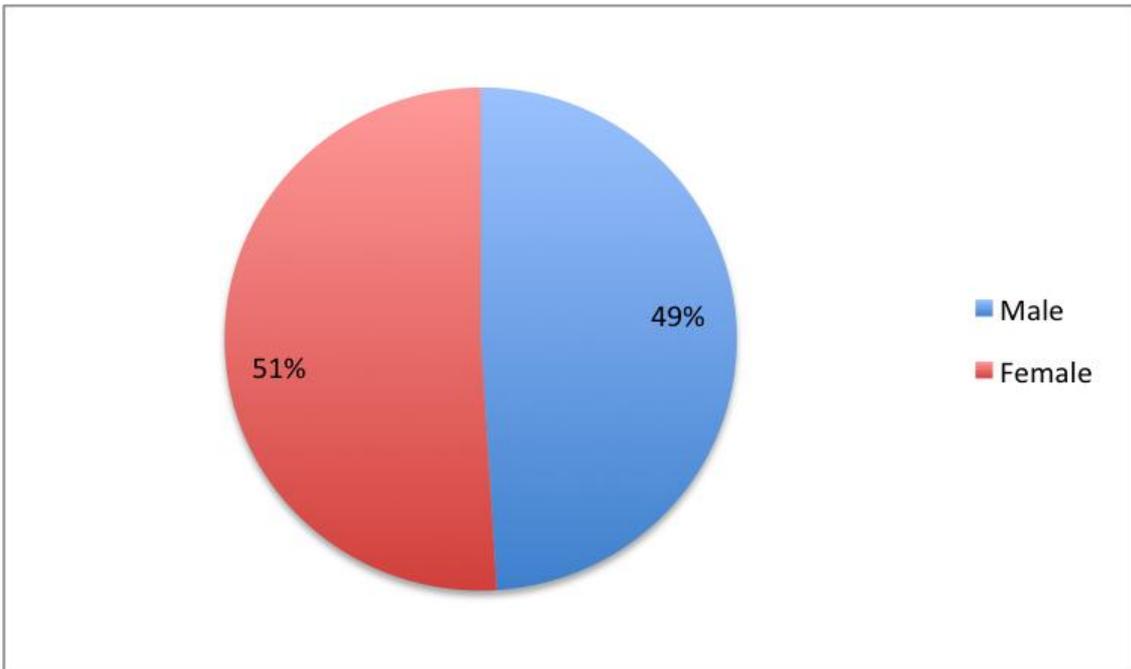


Figure 129: Gender by Career Type

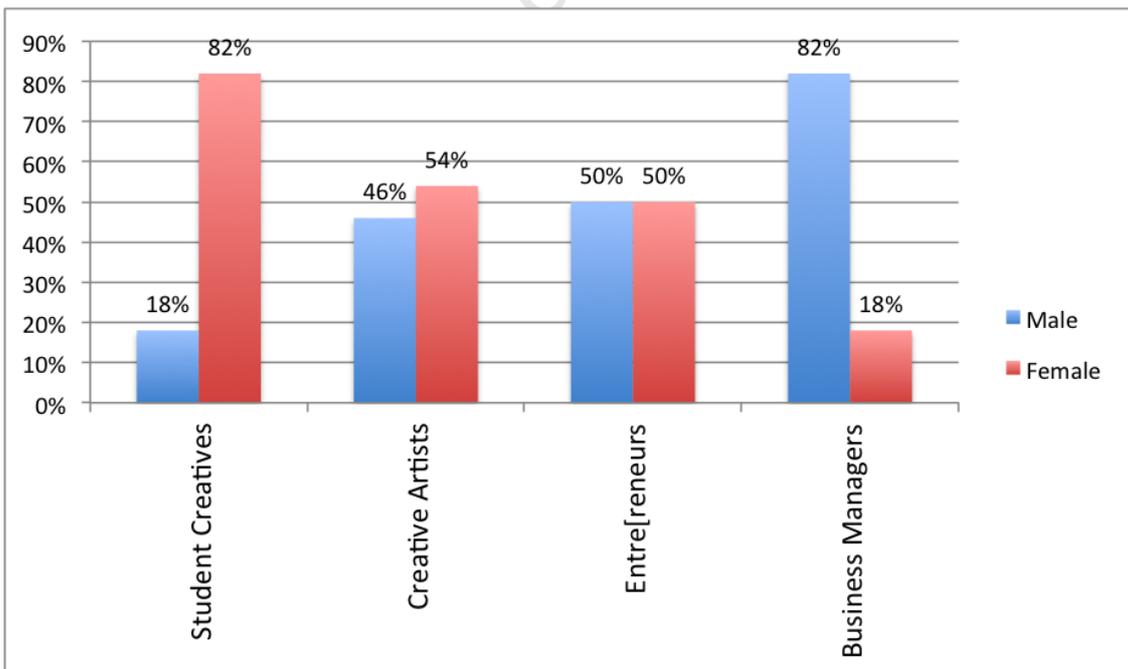


Figure 130: Race, All Data

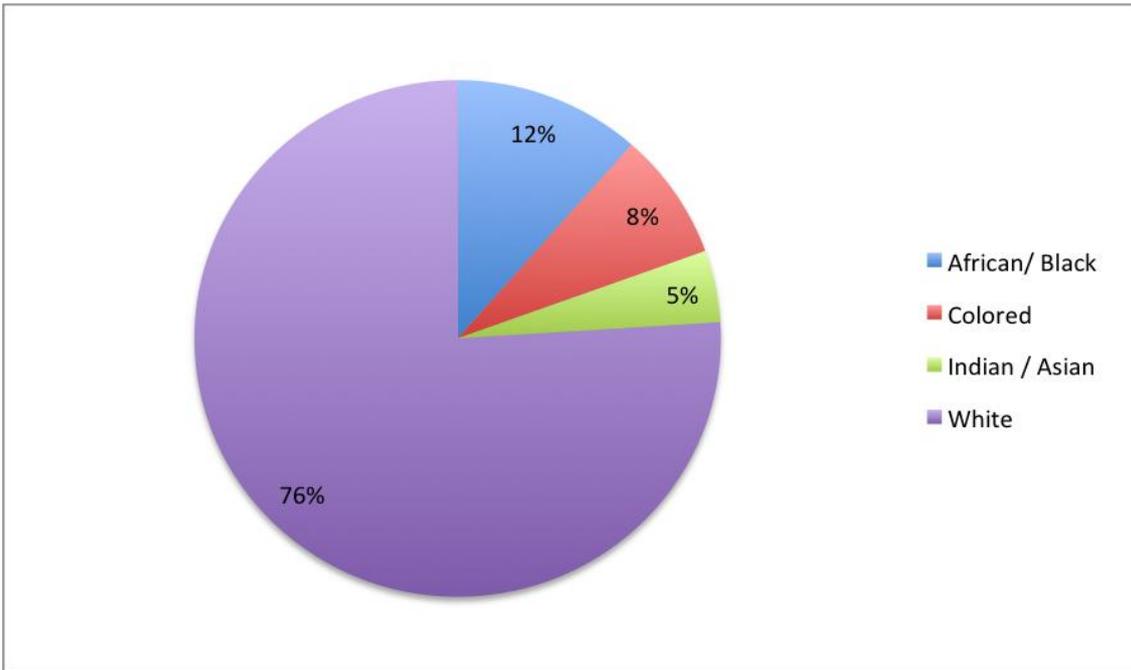


Figure 131: Race by Career Type

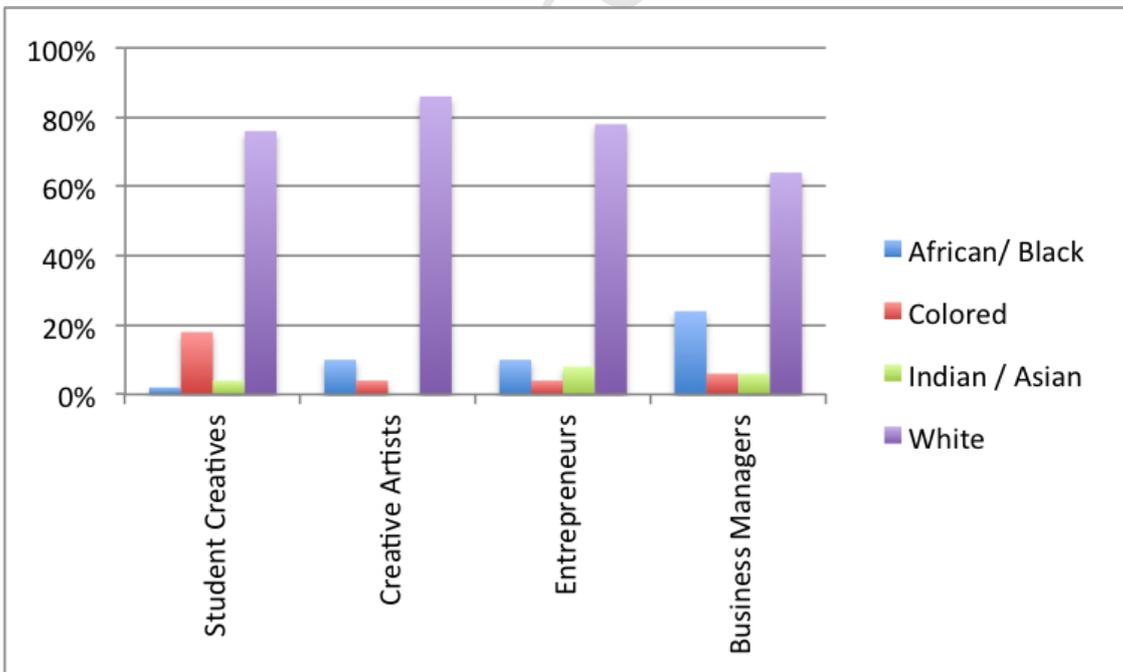


Figure 132: Qualification, All Data

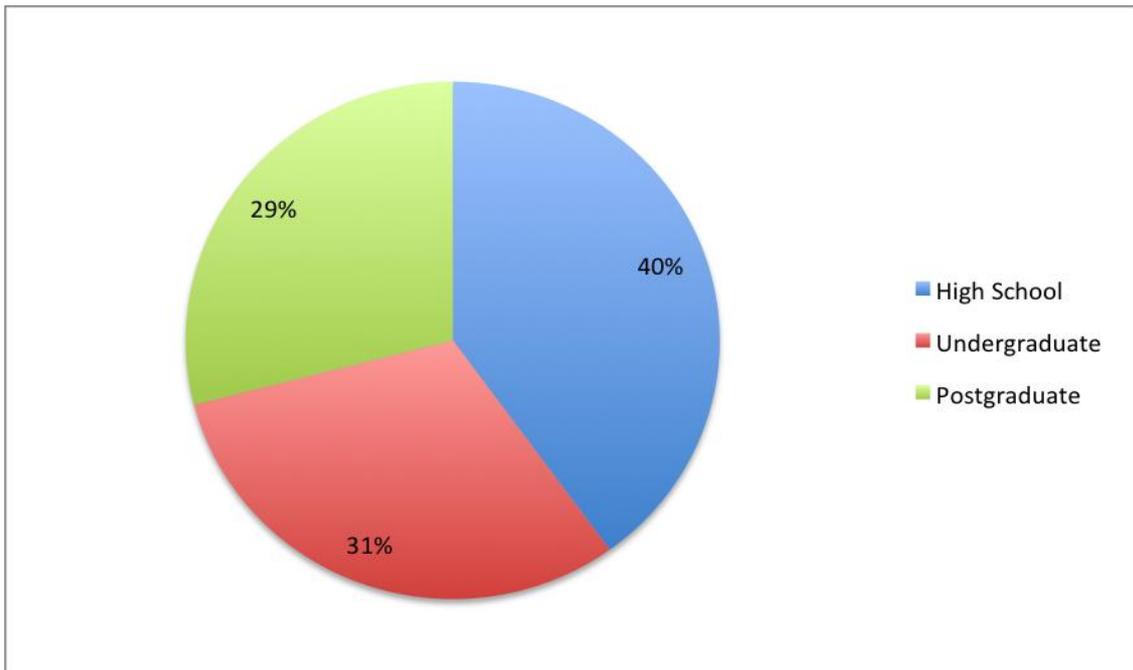


Figure 133: Qualification by Career Type

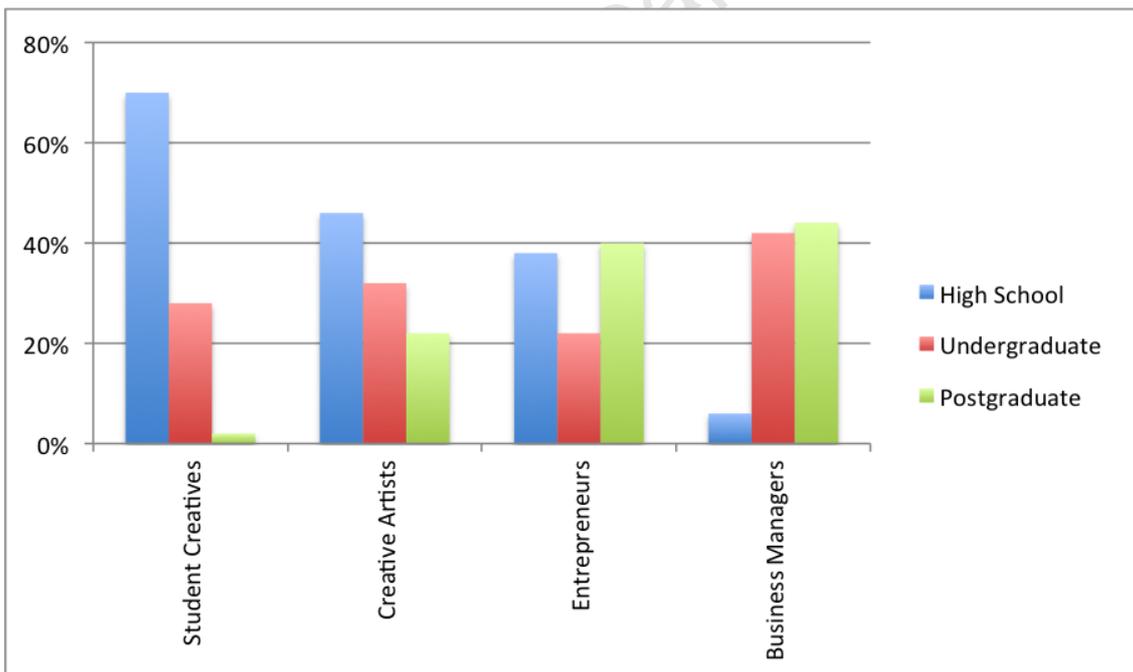


Figure 134: Income, All Data

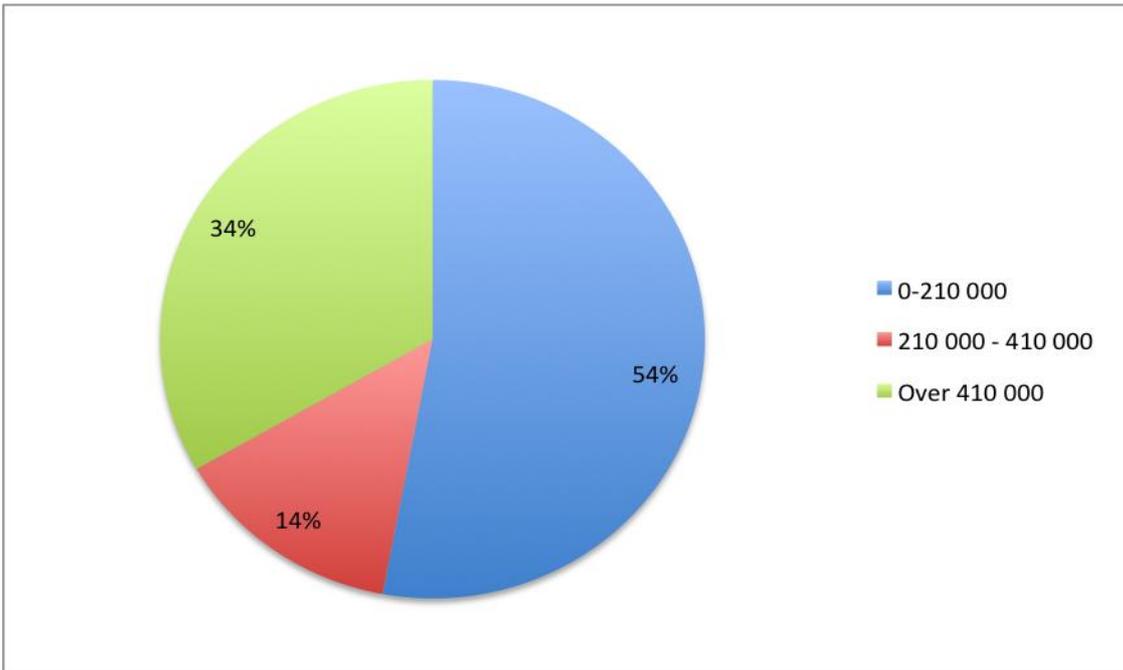


Figure 135: Income by Career Type

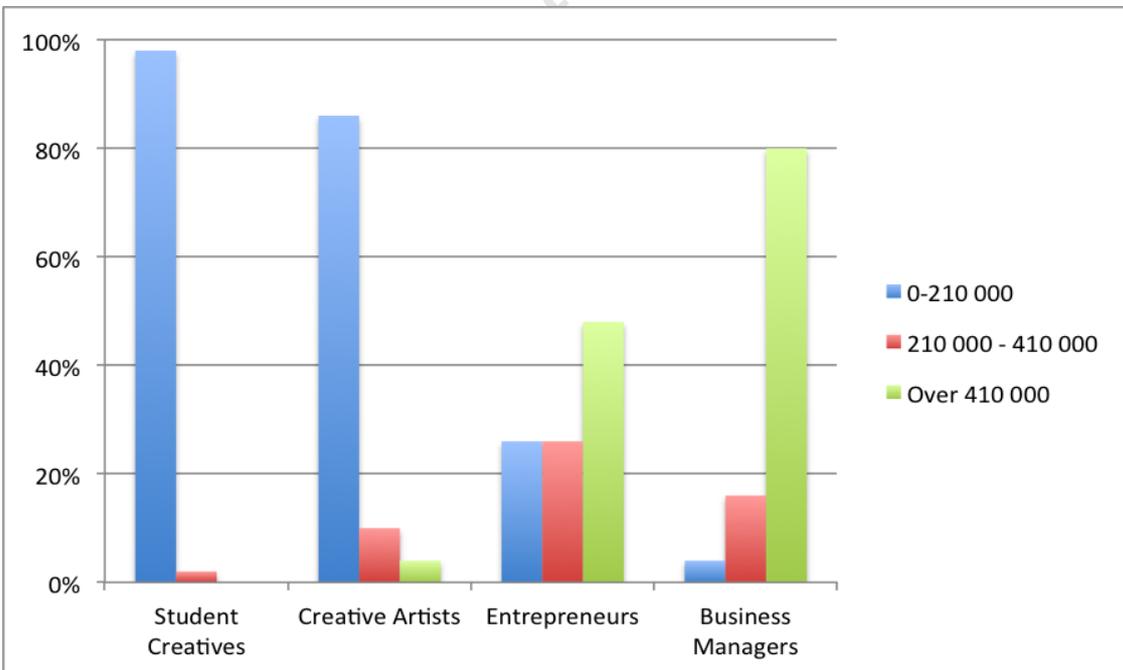


Figure 136: Work Experience, All Data

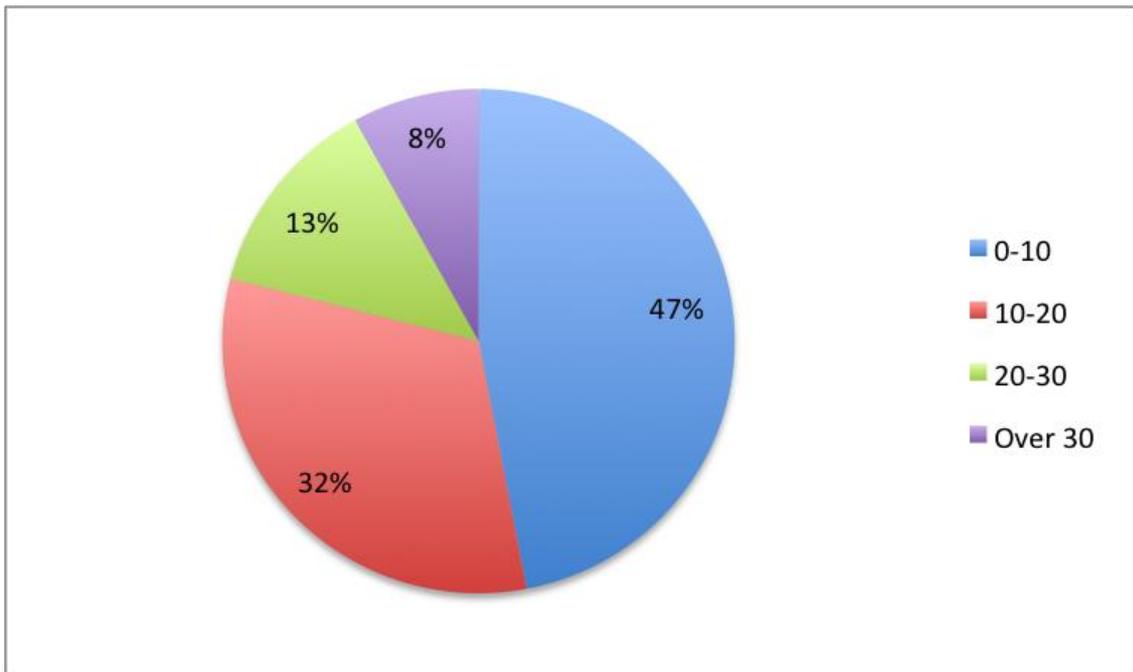
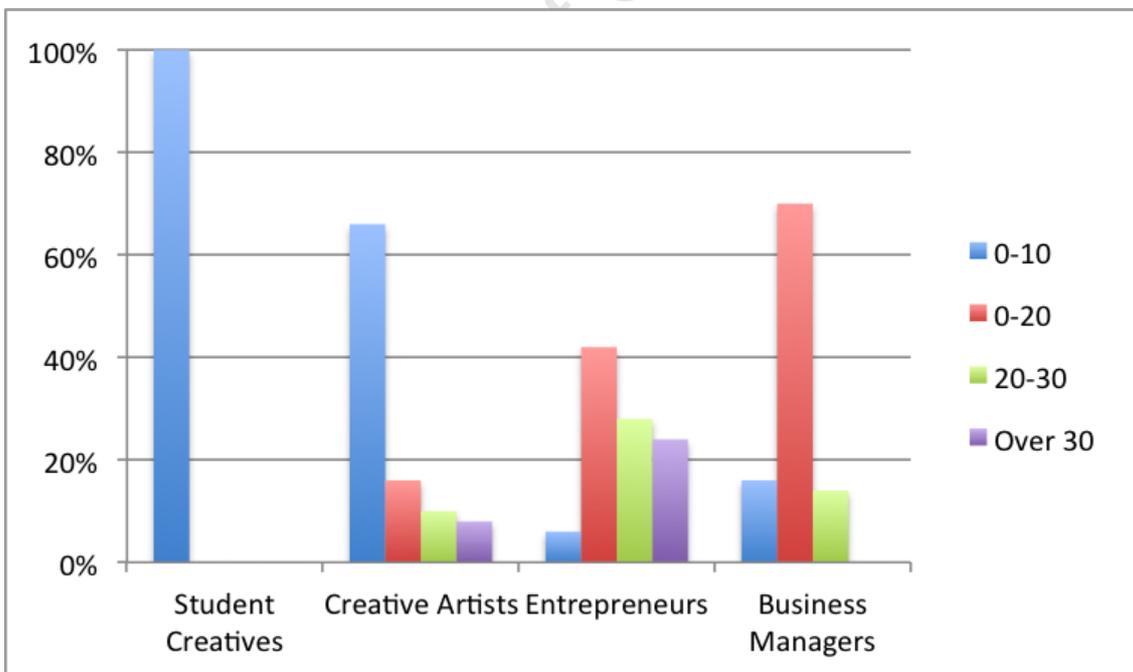


Figure 137: Work Experience by Career Type



Appendix K

Field Work: Classification of Focus Group Responses: Creative Students

Question: Why do some creative students disagree that they receive feedback while pursuing their goal that makes them feel secure or certain or powerful and in control?

Answer A: Creative students may feel criticized and lacking in approval from others in their work.

	Subject ID	Quote	Lines
A	CS1	“People don't take it seriously... they think its just the creative kids – its not a career – its just something they do. They think its something to do while you figure out what you really want to do.”	2 to 5
A	CS2	“our critiques... its not personal but because you've invested so much in it, sometimes you do feel really hard done by and then emotionally you internalize that somehow and that does something to you psychologically.”	4 to 7
A	CS2	“I find that in high school or primary school you write a test everyday and its like “well done!” and you get older and older and you get told well done maybe once a year if we're lucky – after receiving criticisms every day. Sure they do say nice stuff as well but I find even like from my parents and family because they don't really understand what you're doing so its difficult for outsiders to comment.”	32 to 36
A	CS3	“The problem with competency – with art... its such an abstract thing – not a mathematical equation that's right or wrong. You don't know what's right or wrong so you can never be considered competent in other's eyes.... there's never going to be a time when everyone agrees you are this or that – and that makes you feel incompetent”	1 to 5
A	CS5	“I feel amazing when people say yes this is awesome I really like this piece of writing.. it really moved me. But I don't feel like I get that much. I don't feel like I get a lot of people saying I love what you're doing. And that's painful.”	7 to 11

Answer B: Creative students may feel that limitations of the South African marketplace restrict their potential for success as creative artists.

	Subject ID	Quote	Lines
B	CS1	“In South Africa you don't have fashion houses like you have overseas”	8 to 9
B	CS1	“In my field it's a South Africa thing...the basic person on the street only knows a few people who are famous designers... people shop at Truworths and Woolworths”	9 to 12
B	CS2	“security wise you do worry it's not going to be lucrative enough and how are you going to make it. Especially in this country”	8 to 10
B	CS4	“I think because it is such a small community and environment is very competitive – only the very best will... make it.”	1 to 2
B	CS6	“the rest of the country – what they think of art is just so different to what it is. There is a market but its just so small.”	12 to 13
B	CS7	“when you think about the percentage of people who make it into galleries that's pretty intimidating for me.”	15

Answer C: Creative students may experience their creative process as very personal and emotionally charged, leading them to feel vulnerable.

	Subject ID	Quote	Lines
C	CS2	“it's so emotionally taxing and you invest your whole being – the way you think, feel, who you are. What you create is an extension of you.”	1 to 3
C	CS3	“When you make something that really feels worthwhile and you like it and enjoy it because it really is a part of you – it's like your child”	8 to 9
C	CS3	“your most creative moment is when you're going through this emotional turmoil.”	11 to 12
C	CS5	“Art is about relinquishing power. It's about relinquishing control. It's about going inside yourself and finding that mystery that needs to be explored. And that's a very unstable and unsettling process. It's very frightening and its very personal.”	1 to 4

Question: Why do creative students continue to pursue their goals despite these feelings?

Answer A: Creative students may experience an intrinsic pleasure in the act of creation.

	Subject ID	Quote	Lines
A	CS1	“It could be... something they are passionate about and enjoy doing.”	18
A	CS2	“It feels so good when you're doing it – touching what you work with – and when you see it done... its a very personal fulfilment”	66 to 68
A	CS3	“When you make something that really feels worthwhile... you like it and enjoy it because it really is a part of you – its like your child. Its something you can be proud of...That's the best part of it - if you're happy with something you've created.”	8 to 12
A	CS3	“Its such an exciting thing when you discuss ideas with other people and its nice to be able to dream like that – whether you can do it or not – whether you make it or not you can just think – is it possible”	34 to 36
A	CS5	“Its the feeling I get when it touches people – when it moves people in some way. There's definitely personal satisfaction in doing something cool – when you've written something amazing.”	20 to 23
A	CS6	“Really it's about making yourself happy first”	14
A	CS7	“It's sort of satisfaction with building your own thing. You learn your own language and your own way throughout your own practice”	17 to 18

Answer B: Creative students may feel an inner compulsion to be creative artists.

	Subject ID	Quote	Lines
B	CS1	“A lot of people are creative for a reason – they couldn't imagine sitting at a desk job all day. I knew I couldn't study anything else... You have two types of people – creative people and then the other half. And if you're a creative person it's like being a boy trying to be a girl. Its just not possible.”	18 to 23
B	CS5	“Because I've got this gift – that's what it is I feel I've got this gift inside of me that I want to share and I couldn't do anything else.	49 to 50
B	CS6	“Its like – I want to get to a certain point... and I won't feel... accomplishment if I don't get to that point”	15 to 16

Question: Is there a reason why some postgraduate creative students may disagree that they receive feedback making them feel secure or certain and powerful or in control while pursuing their goals than other creative students?

Answer A: Postgraduate creative students may have had professional experience as creative artists and not found positive feedback to their work.

	Subject ID	Quote	Lines
A	CS1	“This could be because they've studied, gone and worked and not been happy and decided they needed to go back and study more.”	24 to 26
A	CS2	“you get older and older and you get told well done maybe once a year if we're lucky – after receiving criticisms every day.”	33 to 34
A	CS3	“they'll probably look at my work and say 'what is this. Where's the painting on the wall that shows my grandfather?’”	24 to 25
A	CS5	They may be disillusioned – having experienced more of the “real world” and its response to their work.”	34 to 35

Question: Why do some creative students feel neutral about the novelty or variety that achieving their goal will bring to their lives?

Answer A: Creative students may feel anxiety about how they will be received in the job market once they graduate.

	Subject ID	Quote	Lines
A	CS1	“I think its just a perception – they think it won't give them any good experiences. They think they'll graduate and they won't have anywhere to go with their degree. They don't think they'll become super famous – they just settle”	47 to 49
A	CS3	“right now I'm actually scared of attaining my goal – I would be happy but I'd also be scared because what then?”	27 to 29
A	CS4	“there's no aim - you're an artist now you've got a job. It's not like being a doctor. As an artist we can go and do something completely different – so you don't have a defining role.”	15 to 17

Question: Why do creative students continue to pursue their goals despite these feelings?

Answer A: Creative students may experience an intrinsic pleasure in the act of creation.

	Subject ID	Quote	Lines
A	CS1	“It could be... something they are passionate about and enjoy doing.”	18
A	CS2	“It feels so good when you're doing it – touching what you work with – and when you see it done... its a very personal fulfilment”	66 to 68
A	CS3	“When you make something that really feels worthwhile... you like it and enjoy it because it really is a part of you – its like your child. Its something you can be proud of...That's the best part of it - if you're happy with something you've created.”	8 to 12
A	CS3	“Its such an exciting thing when you discuss ideas with other people and its nice to be able to dream like that – whether you can do it or not – whether you make it or not you can just think – is it possible”	34 to 36
A	CS5	“Its the feeling I get when it touches people – when it moves people in some way. There's definitely personal satisfaction in doing something cool – when you've written something amazing.”	20 to 23
A	CS6	“Really it's about making yourself happy first”	14
A	CS7	“It's sort of satisfaction with building your own thing. You learn your own language and your own way throughout your own practice”	17 to 18

Answer B: Creative students may feel an inner compulsion to be creative artists.

	Subject ID	Quote	Lines
B	CS1	“A lot of people are creative for a reason – they couldn't imagine sitting at a desk job all day. I knew I couldn't study anything else... You have two types of people – creative people and then the other half. And if you're a creative person it's like being a boy trying to be a girl. Its just not possible.”	18 to 23
B	CS5	“Because I've got this gift – that's what it is I feel I've got this gift inside of me that I want to share and I couldn't do anything else.	49 to 50
B	CS6	“Its like – I want to get to a certain point... and I won't feel... accomplishment if I don't get to that point”	15 to 16

Appendix L

Field Work: Classification of Focus Group Responses: Professional Creative Artists

Question: Why do some creative artists disagree that they receive feedback while pursuing their goals that makes them feel secure or certain; powerful or in control or approved of by their friends, family or community?

Answer A: Creative artists may feel exposed to the criticism of society, their families or their employers for their choice of career or their creative output.

	Subject ID	Quote	Lines
A	CA1	“The cliché of the father disapproving of the daughter becoming an actress is firmly grounded in the reality that you'll end up being disappointed and crushed by reality.”	6 to 8
A	CA2	“your employer... or perhaps parents... you're looking to them to see – am I doing something right... Most of the time our answer is no”	42 to 45
A	CA2	“we look to someone else to measure our success... You look at those around you and you expect them to tell you if you are doing it right or not”	48 to 51
A	CA3	“when you create, it's the ultimate vulnerability... the risk of judgment is huge – and its not just judgment on the work itself – its judgment on the creator of it – and if its a creative work its personal – its a judgment on that person”	1 to 5
A	CA4	“I think you have to be willing to put yourself on the line a lot – I think you have to be willing to accept criticism”	2 and 3
A	CA5	“Society doesn't really perceive creative jobs as a career... I got to a point where I felt really bad about what I was doing because I could see it on people's faces when you say what you do. You get to the point of feeling ashamed of what you do”	1 to 8
A	CA6	“Being an artist or someone who creates things is a very lonely and isolating path.”	1
A	CA7	“Most of the time it's lonely – you work autonomously... sometimes there's	1 to 5

		a lot of unique voices out there who don't approve of your unique voice. I think there's less time for appreciation in the industry amongst ourselves... I think the fear comes in when you're craft is out there. How will people take it.”	
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Answer B: Creative artists may feel anxiety about their finances.

	Subject ID	Quote	Lines
B	CA1	“they do work in more unstable environments. The odds of success are much less. The average actor earns less than the average waiter in the US... you'll end up being disappointed and crushed by reality. And that's what happens to a lot of actors – after a few years they go into advertising”	3 to 9
B	CA6	“there's this fear you know? Its like – am I gonna run out of money and starve?”	13 to 15
B	CA7	“it could be... financial implications. You always think what next, what next, what next. You might be on your first project and already thinking about your third project.”	7 to 10

Question: Why do some creative artists somewhat disagree that they have the abilities required to achieve their goals or that they will achieve them?

Answer A: Creative artists may feel a lack of social support.

	Subject ID	Quote	Lines
A	CA1	“I've just felt that I haven't been socialized into doing it – I didn't come from a background that encouraged me to do it.”	
A	CA2	“you're looking to them to see – am I doing something right – am I going the right way. Am I doing it right. Most of the time our answer is no. Colleagues or peers or people who don't matter will tell us all the time”	42 to 45
A	CA7	“It's difficult when there's no professional standards, no institutional framework so you're just wandering alone and hoping people will look up to what you do”	37 to 38

Question: Is there a reason a large proportion of creative artists who feel less confident about their abilities or likelihood of achieving their goal are male?

Answer: A: Male creative artists may feel that socially designated roles require them to be controlling and perceived as competent in a manner that is at odds with a creative career.

	Subject ID	Quote	Lines
A	CA1	“I think... there's always something dubious and suspect about a creative male in this male dominated hard nosed business driven military oriented world”	45 to 47
A	CA1	“I think men when they're creative feel they are stepping outside of their socially designated roles as breadwinners at the helm of industry moving the country forward – or whatever it is men are supposed to do”	49 to 52
A	CA2	“Men are expected to be masculine, structured organized disciplined, women are allowed to be flighty and creative. For a man to be in that position – its women's work.”	57 to 59
A	CA3	“society requires that men are more – masculine – controlling in their way of being. There's less room for a man to make mistakes and explore – while women have that chance more easily”	49 to 52
A	CA4	“Men feel a stronger attachment to showing themselves to be competent or capable... its a stronger fear to challenge their own sense of competence. To take on things where they might look stupid – because men are not allowed to take on things like that by society.”	50 to 53
A	CA5	“there's a very small market or area for men to be creative without being seen as weird or gay. Whereas women are seen as creative beings. They make things look pretty – themselves look pretty. Whereas men are meant to be the provider... stable job, income... and then they're in this artistic field where they don't have that – and I think in society they can get a lot of flack for that.”	30 to 36

Question: Why do creative artists continue to pursue their goals despite these obstacles?

Answer A: Creative artists may enjoy the positive regard that their creative output brings them.

	Subject ID	Quote	Lines
A	CA1	“It... became an identity – a way for me to feel a safe space between myself and the other kids – if I were to tell them jokes or show them magic tricks or entertain them – were to be some way of being able to avoid being bullied or subjugated by the social group I was in.”	13 to 17
A	CA1	“because you are the centre of attention and when everybody claps they clap for you – so there are a lot of rewards.”	28 to 29
A	CA2	“When I give you something and you like it – that's it. When someone sees something I make and they like it. That's it.”	52 to 54
A	CA3	“Generally I felt quite secure and appreciated and loved... I'm realizing how much I owe my community for giving me the space to develop the way I have. That's it – that's the end of the day.”	41 to 43
A	CA6	“the thing that... makes it worth it for me is getting to do these characters and see people laugh”	23 to 24

Answer B: Creative artists may feel please in the act of creation.

	Subject ID	Answer	Lines
B	CA2	“When you're doing what you do when your creative – whether its knitting dolls or making wine... that's when you're alive. Everything around that is just a case of getting back to that point. ...And if you could just stand there and do that forever – that would be fine.”	28 to 33
B	CA3	“Losing that mind part of it and being very much there and watching – for me the best work I do is when I'm so present.”	18 to 20
B	CA4	“Clearly its the feeling I get when I'm doing what I'm doing – its the sense of energy and engagement and passion and creativity – its a feeling – a feeling that I am making something cool”	18 to 22

Answer C: Creative artists may feel that a career of creative self-expression is the only path available to them.

	Subject ID	Answer	Lines
C	CA1	“Some – a lot of actors feel they can't exist anywhere else – they can't exist in another field. They get addicted to the lifestyle and the highs and lows that come with it.”	37 to 39
C	CA3	“When I'm not doing it I feel – dead.”	22
C	CA5	“They know they won't fit in any other career or working environment because they are different... You just kind of give up and say – well there's no space in the world for creative people and I'm a creative person. I'm just going to have to deal with it.”	16 to 21
C	CA6	“there's never been anything else I thought I could do – I've wanted to do this since I was ten years old. I think for people who live this kind of life that I've spoken to – they generally had a total drive to do what they were doing”	16 to 18
C	CA7	“I asked myself one question. What is it I can do until I die”	19 to 21

Question: Why do some older, more experienced creative artists disagree both that they are made to feel secure and certain or powerful and in control by their environments as well as disagreeing that achieving their goal will bring them these qualities?

Answer A: Older creative artists may feel that the ideals of their youth are not achievable.

	Subject ID	Answer	Lines
A	CA4	“they probably feel the same insecurity and lack of control but I think they're resigned. I think when you're younger you're probably more apt to believe that somehow your going to achieve this thing”	54 to 56
A	CA5	“It could be just the younger people don't have experience so they're more naïve. They think they're going to achieve world fame and security... but its not that easy.”	37 to 38

Appendix M

Field Work: Classification of Focus Group Responses: Entrepreneurs

Question: Why do some entrepreneurs disagree that they receive feedback while pursuing their goals that makes them feel their work has significant personal meaning?

Answer A: Entrepreneurs may not enjoy performing the day-to-day administrative tasks required to achieve their goals.

	Subject ID	Quote	Lines
A	EN1	“I think being an entrepreneur is often about having to do mundane things in the moment in order to fulfil some longer term vision... I think a lot of the time I've spent as an entrepreneur was about getting printer cartridges and dealing with leaking ceilings. These things had little meaning to me as such”	1 to 2; 5 to 7
A	EN3	“afterwards you're just running around like a maniac and you have to work Sundays and it's very boring and the labour lets you down and Monday they don't pitch and its not funny anymore. You have to do it – it's the business.”	3 to 5
A	EN4	“you have to do a lot of stuff where you don't actually see 'x; equals 'y'”...I don't really enjoy doing financial records and sending thousands of emails. I do enjoy doing that when I feel called and it feels very aligned with – this is what I'm supposed to be doing now. But a lot of the time I'd rather have someone who feels passionate about keeping records to do that if that makes sense... I understand logically why all those pieces need to be done so I just do them.”	2; 7 to 11
A	EN6	“I would imagine that the larger the business or the more complex it gets and - this is a small business but nonetheless there's all the non inspiring elements of it. Staff management, taxation, accounts. These are necessary.. and it is tedious and not inspiring and quite exhausting. I see it as necessary – but it certainly doesn't inspire.”	1 to 6
A	EN7	“A lot of the things I have to do to get to that final goal are a pain in the ass – its' having to manage your office space, staff issues, logistical concerns... So I'd say people who say that are probably feeling frustrated with some aspect of the day to day of running their business”	2 to 4; 10 to 11

Question: Why do some older, highly qualified entrepreneurs feel neutral about the feedback of novelty and variety they receive while pursuing their goal?

Answer A: Some older entrepreneurs may feel their work is repetitive.

	Subject ID	Quote	Lines
A	EN1	“Perhaps it's just more of the same... there's not much new to excite or new mountains to conquer... you carry on doing what you know”	25 to 29
A	EN2	“Perhaps the more you go down one line of business, the more you know about that line”	18 to 19
A	EN3	“Well they're probably just tired of doing the same thing over and over again. The same slog very day”	35 to 36
A	EN4	“I think it's a simple case of fatigue. People reach a certain age and their work no longer excites them in the same way.”	23 to 24
A	EN7	“the more obvious answer is they've been doing what they do for so long it no longer feels new to them”	

Question: Why do some entrepreneurs disagree that achieving their goal will bring them power and control; security and certainty or the approval of their friends, family or community as well as disagreeing that they receive feedback that makes them feel secure and certain or powerful and in control while pursuing their goal?

Answer A: They have reached a ceiling to what they can achieve.

	Subject ID	Quote	Lines
A	EN1	“If you're older you may have achieved what you set out to. So there's no real way up from there – its just more of the same.”	35 to 36
A	EN3	“Most people I think feel a sense of - they feel they'll never be on top of the pile it just never stops.”	38 to 39
A	EN4	“I believe that we have to drop any goals in our lives. Even with my organization where we're trying to save children you have to let go of goals because we really lose power if we don't. So I don't see this as a goal – as achieving anything. I'm doing what I feel is right in the moment I guess.”	30 to 33

A	EN5	“Being an entrepreneur means you can never take it easy. You have to be constantly innovating. Perhaps they've realized over time that it's a perpetual struggle of staying on top”	27 to 29
A	EN7	“Often when you have something you want to create it's hard to ever feel that that thing is complete. There's always more you want to do and wish you could have done”	27 to 29

Question: Why do entrepreneurs continue to pursue their goals?

Answer A: Survival or necessity

	Subject ID	Answer	Lines
A	EN1	“ You really don't have a choice... you could give it all up, go get a job but that's too painful”	15 to 16
A	EN1	“Probably inertia and necessity.”	30
A	EN2	“In the beginning it was just a matter of survival”	6
A	EN3	“They have to... Either they have to because it's a big dream.. Because they were retrenched”	20; 28
A	EN3	“A lot of the time they have to – its their source of income and they don't necessarily have a choice. Often people will have had careers in the corporate sector and then been retrenched or left their jobs for other reasons – and they turn to creating their own businesses to make ends meet”	43 to 46
A	EN7	“There's not much else to do by that stage... the alternative isn't acceptable to them”	

Answer B: They have a strong vision or feel a sense of inspiration they desire to see fulfilled.

	Subject ID	Answer	Lines
B	EN1	“I think once you've invested a lot in achieving a particular vision, failure becomes less of an option... Sometimes... belief in the vision is so strong”	14 to 17
B	EN1	“I'd say their desire to still achieve their vision is too strong to compromise.”	40
B	EN2	“because they are ideas people and they see opportunities”	20 to 21
A	EN3	“ they have to because its a big dream”	20
B	EN4	“I really strongly felt guided – like this was coming through me and it was something I was meant to do so I just followed that and trusted it I guess.”	16 to 18
B	EN4	“So I really saw this as a vision already... I felt like it was already done. I felt like it was already done. I just had to be a channel for it to come through. I never pictured in my head that it wouldn't happen.”	22 to 25
B	EN6	“I really wanted to bring what I found overseas here and form something that people could experience here.”	19 to 20
B	EN7	I do this because I believe that it's possible to achieve something that means a lot to me. I think a lot of people have visions – but they don't necessarily believe that it would ever be possible to achieve them”	12 to 14

Answer C: They have a belief their visions are achievable

	Subject ID	Quote	Lines
C	EN3	“They have to. Either they have to because its a big dream – but mostly – because they are ideas people and they see opportunities.”	20 to 21
C	EN4	“I firmly believed that I could do this... But I really believed I could do it and I didn't believe what people said.	12; 14
C	EN6	“Confidence that I can address that conflict and either find a solution or steer my business away from it or overcome it in some way.”	33 to 34
C	EN7	I do this because I believe that it's possible to achieve something that means a lot to me. I think a lot of people have visions – but they don't necessarily believe that it would ever be possible to achieve them – and they never take the time to find out.”	

Appendix N

Field Work: Classification of Focus Group Responses: Business Managers

Question: Why do some business managers strongly agree that achieving their goal will bring them more power or control?

Answer A: Some business managers may feel that achieving their goal will bring them recognition from the corporate environment and in particular their managers, leading to rewards like greater freedom, security, income or self esteem.

	Subject ID	Quote	Lines
A	BM1	“If I do well in what I'm aiming for then my manager will be happy with me... he'll want to give me... more interesting jobs and I'll do what I really want to do”	5 to 9
A	BM1	“this happens to me when I'm working in a context for someone who's really going to recognize what I'm doing”	9 to 10
A	BM1	“I feel my work is going to be seen an appreciated by others”	15
A	BM2	“There were many years of fear... there was... car park politics. In the morning the boss would touch the bonnet of your car to see if its cool to show how long you've been there”	8 to 10
A	BM5	“In a work environment they receive a greater and more consistent volume of motivational messages from their managers or their co-workers.... If they get a promotion then their families may benefit”.	2 to 4
A	BM6	“I think you feel recognized by others – so this is an easy, structured way to get some credibility or whatever motivates you... feeling recognised by the structure that the job has created – by the people in that environment... People in those environments say “I was recognized so now I can recognize myself”	1 to 11
A	BM7	“For me this is about being recognized by my organization. If I do well, then people will respect me, I'll become indispensable”	1 to 2

Question: What do some business managers sacrifice for this feeling?

Answer A: Some business managers may sacrifice their family life and social connections

	Subject ID	Quote	Lines
A	BM1	“my family life can be influenced. My private life – my personal life because I’m putting a lot of energy into reaching for my goal”	18 to 19
A	BM2	“Family life is one. Big one”	26
A	BM3	“Certainly family, friends and a balanced lifestyle... I gave up the opportunity to spend time with my family, to see my kids growing up... living with this kind of lack of community is a sacrifice”	11 to 12; 16
A	BM5	“Yes, you really sacrifice closeness in other areas of life.. closeness at home in your domestic relationships, closeness with co-workers. If you're aiming for control you're going to step on some heads – and that can isolate you”	8 to 10
A	BM6	“Now when I tell a lot of corporate people about my choice to stay at home more, I don't think I've ever had anybody say to me “ok nice choice but..” the one older guy's eyes filled with tears and said “I feel like I missed my children's childhood.” There's just not enough time you've got to compromise on something. I've noticed at work when people introduce themselves they'll say my hobbies are spending time with my family. Suddenly that's your hobby?”	16 to 22
A	BM7	“Its everything that goes with a personal life”	15

Question: Is there a reason why a high proportion of business managers who feel that achieving their goal will bring them greater power or control may be Black / African?

Answer A: Black / African business managers may have a misperception of what power or control will bring them.

	Subject ID	Quote	Lines
A	BM1	“Its a double edged sword. You can obtain the power but then what do you do with it?... I think that is bound to change in time. Once there are a few more generations away from apartheid and people have had power for longer”	24 to 30
A	BM2	“Because there's an innocence still. They believe that their mate will keep them there.”	38
A	BM4	“People get into these positions and – its a lack of experience – there's a perception of what it means to be in a position of power that doesn't necessarily match the reality.”	13 to 15
A	BM6	“There's a naivety that comes from believing that – if you grow up seeing everyone having all these things and then you strive to get there. But you get there and then you learn that that's not – its lonely at the top.”	23 to 26
A	BM7	“I had a very unrealistic vision of what it meant to be a manager of a business...I've realized that my old vision of what it meant is really – really just an illusion.”	22; 26

Answer B: A past of being denied power or control may lead Black / African business managers to seek greater power or control.

	Subject ID	Quote	Lines
A	BM1	“black managers really aspire to reach things they've been denied or that they perceived to be important. Someone who has been powerless tends to seek power.”	22 to 24
A	BM3	In South Africa this could be because of childhood experiences from the apartheid days... many South Africans were left feeling but powerless but seeing images of power all around them... So there's an aspiration to achieve something”	17 to 20

	BM5	I think this is almost inevitable, given the long period of dispossession and servitude which black folk have been subjected. They now have an urgent need to assert themselves in public life, and the corporate environment is readily available.”	11 to 13
A	BM6	“Its a developing, aspirational society. Walking in the white man's path”	23

Question: Why do some business managers disagree that they receive feedback indicating their work has personal meaning, feedback of novelty or variety or feedback of approval from friends, family or community while pursuing their goals?

Answer A: Some business managers may feel disconnected from co-workers or their communities.

	Subject ID	Quote	Lines
A	BM1	“there's a lot of competition in the workplace. People aren't going to appreciate what you do.”	31 to 32
A	BM2	“they come into the community they're seen as driving the big car and going away early in the morning and coming back late at night. They're seen as neglecting their families”	44 to 46
A	BM3	“they may feel disconnected from family and friends”	23 to 24
A	BM5	“Most successful managers reach their goal by becoming workaholics... every other sphere of their lives is neglected... society doesn't like that and withdraws its approval because of it”	14; 17 to 18
A	BM6	“Sometimes if I feel if I didn't continue any of the work I was doing, nobody would notice”	36 to 37
A	BM7	“For me this has depended a lot on the relationship I've had with my co-workers and the authority structures within the company. When I've had good relationships with people – and I've felt fairly treated, then I tend to take pleasure in my work. When I have had a good manager who's recognized my skills then tasked me in areas where I'm well equipped to succeed and left me to do things the way I needed to – then given me good feedback afterwards. Then I've been very satisfied.”	30 to 35

Answer B: Some business managers may feel a lack of freedom to express themselves creatively.

	Subject ID	Quote	Lines
B	BM2	“I went in there with creativity and they put me in strategic planning. Those guys were just doing numbers not strategy. And you need a marketing type to grow things. People seem to be happiest when they have their own agenda. The closer you got to self-creativity in a corporate environment the happier you are.	55 to 59
B	BM6	“I’ve felt more like that than in my previous work because then I was just unleashing my creativity and energy while now it doesn't matter anyway because I have such a puny job”	29 to 31

Answer C: Some business managers may feel an objection to the goals of their workplace

	Subject ID	Quote	Lines
C	BM2	“I couldn't sell Coca-Cola – even if I had a big marketing job in it and there were lots of parties. I need to sell an idea. That was my difference. I believed in the ideal. So I would use what I was given to further my ideal.”	47 to 49
C	BM3	“They may also feel a sense of shame at the goals of their business - say its armaments or toxic chemicals or such. Its not uncommon for people to feel a disconnect between their own values and the values of their business.”	24 to 26
C	BM4	“Assuming the manager is not ashamed of his or her employment from a moral standpoint”	17

Question: Why do some business managers feel neutral about the feedback they receive indicating they have the abilities required to achieve their goal?

Answer A: Some business managers may feel that their managers lack the skill required for affirming people's abilities.

	Subject ID	Quote	Lines
A	BM1	“I think you hear this with a lot of managers – people who are functional managers – people who are really good at designing a product or managing a process then they get promoted into a management position where they have to deal with people – and that can really be challenging because they're totally different skill sets. So I've felt that way in situation where I was asked to do something I didn't know much about.”	51 to 56
A	BM2	“You should get it at the very least on your once a year performance appraisal – and I got very good ones and I'll be endlessly grateful to my manager because of that.... I've seen it in all the big firms. People don't get affirmed. Someone else takes it as theirs”	70 to 72; 77 to 78
A	BM3	Often managers can have exaggerated opinions of their own abilities but be insensitive to the opinions or feelings of their charges. Not getting good feedback is a sign of a bad boss.”	31 to 32
A	BM4	“The Peter principle might come into play where the manager is seriously concerned”	21
A	BM6	“I don't think managers are very good at making people – its like parenting isn't it. You give someone a challenging something – let them know they've got a really good chance of doing it. But I don't think people know how to manage. So people will be more instructing and not coaching or educating. It's like ok you must do this and this. It doesn't make you feel very happy or competent.”	44 to 48
A	BM7	“This is definitely about managers. I had a manager at (company name) who was so affirming. He made you feel like anything was possible when you were around him. He made you feel like you could do – and would do anything. I was willing to work so hard for that guy because – his attitude towards me and my work made me deliver my best... I think managers are often too threatened to give people good feedback... I had a manager who was very bad with people... she was useless at understanding how to make people feel cared for, special, competent.”	48 to 58

Question: Why do some older business managers feel so negative about so much?

Answer A: Some older, more experienced business managers may feel a sense of disillusionment in or betrayal by their companies.

	Subject ID	Quote	Lines
A	BM1	“ I felt betrayed by my company, I felt betrayed by my boss.”	60
A	BM5	Its very common to hear stories of disappointment from older colleagues who say it doesn't help to work hard because corporate life is unfair and you're doomed never to succeed. I've felt this way when other people were promoted past me despite the fact that I felt I was better qualified or more likely to succeed.”	26 to 29
A	BM6	“Maybe there's a cynicism that comes in there. It didn't give you what you thought it would give you. Just more of the same – and that's depressing”	53 to 54
A	BM7	“I've seen managers at the ends of their careers – and there's often a sense of disappointment In them, usually what happens is they get written off by their co-workers – they get taken out of “the game” and are marginalised. At the end they get a half hearted farewell”	59 to 61

Answer B: Some older, more experienced business managers may feel a sense of boredom due to the repetitive nature of their work.

	Subject ID	Quote	Lines
B	BM2	“its more of the same every day. Same parking place same newspaper, same tea at same time.”	86 to 87
B	BM4	“I'd suggest they have many months of reports and monthly meetings and figures that are routine and at times intrude into the time needed to work on real goals”	30 to 32
B	BM6	“Maybe there's a cynicism that comes in there. It didn't give you what you thought it would give you. Just more of the same – and that's depressing. I'm very happy to have a variety of things to do in the week. Its never continuous because it could be very, very boring otherwise.”	53 to 56

Question: Why do business managers continue pursuing their goals despite these obstacles?

Answer A: Money.

	Subject ID	Quote	Lines
A	BM1	"I think the only thing is money. I've need to carry on doing my job, I've needed the income. I needed to keep my job."	42 to 43
A	BM1	"The only thing that kept me going during that phase was I was earning a really good salary... So it was very tempting to continue in that vein."	65 to 66
A	BM2	"You've got two children in a private school and major medical aid – its practical – pragmatic... you collect your salary at the end of the day"	63 to 64; 68 to 69
A	BM2	"Because of the structures they've built up around themselves and the financial needs."	79
A	BM3	"Maybe they just have no other means of earning a living so they feel trapped."	29 to 30
A	BM6	"Money. I don't want to have to be reliant on my partner. I'm not used to that... and we'll have more discussions about how we spend our money"	41 to 42
A	BM7	"I agree salary is a big factor."	44

Answer B: Lack of alternative

	Subject ID	Quote	Lines
B	BM1	"I've needed to carry on doing my job, I've needed the income. I needed to keep my job. For the security of it I guess."	42 to 43
B	BM1	"I didn't have a choice. They talk about golden handcuffs and that's very much a reality"	66
B	BM2	"There's no alternative... If you're over forty you aren't going to get another job"	64 to 65
B	BM3	"Maybe they just have no other means of earning a living so they feel trapped."	29 to 30
B	BM5	"I think at a certain point you've passed the point of no return. You're locked into what you're doing – into this way of life."	30 to 31
B	BM7	"Once you're in a job its really hard to move... up and leaving means facing the unknown... I've done it – and it was tough"	41; 46 to 47

Appendix O

Field Work, Focus Group Transcripts - Creative Students

Career Category: Creative Students

Participant ID: CS1

Questions 1 and 2	
1	I think maybe people see arts and creativity as a way not to make lots of money and be
2	successful – people don't take it very seriously – I know I've had that before. They don't take
3	my course seriously – other students. You can tell people don't take it seriously they think its
4	Just the creative kids – it's not a career – it's just something to do. They think its something to
5	Do while you figure out what you really want to do. And also – most famous artists people
6	know of – like painters and stuff – they're dead. So in the culture, people don't know about
7	other famous artists. You and I know that but take other people who are doing computers
8	– they don't know famous artists – just ones in the textbooks. In South Africa – there's
9	no – you don't have fashion houses here like you do overseas. In my field its a South Africa
10	thing – maybe in all creative fields its a South African thing... the basic person on the street
11	only knows a few people who are famous designers. People just shop at Truworths and
12	Woolworths – and that's it. For me I actually didn't really. I think I see it as being naive. I
13	grew up and studied in a small town and had these big hopes for Cape Town and it being the
14	land of milk and honey and all – while I was studying I never felt incompetent. I felt very
15	competent. I always knew I'd be successful in my area. Even at school I wasn't one of those
16	kids who didn't know what I wanted to do with my life. I knew what I wanted to do since I
17	was 12.
Question 3	
18	It could be because – could be something they are passionate about and enjoy doing. A lot of

19	people are creative for a reason – they couldn't imagine sitting at a desk job all day. I knew I
20	couldn't study anything else. Even if I had doubts – and didn't feel confident I knew that was
21	not me – I couldn't sit at a desk all day and type shit and play with numbers. You have two
22	types of people – creative people and then the other half. And if you're a creative person its
23	like being a boy trying to be a girl. It's just not possible.
Question 4	
24	If they were postgrad how long would they have been studying for? This could be because
25	they've studied, gone and worked and not been happy and decided they
26	needed to go back and study more. And that's the big problem I've always believed that with
27	creativity, in terms of design – physically being creative – its not so much something that can
28	be taught – its something within you. That's why I didn't do honours or masters. I thought the
29	best way was to get into it and live in it rather than read about it in a textbook. So I think its
30	definitely something that's in you. Creativity can't be taught. Maybe some of these people
31	want to be creative and have that creative side but are pushing it too much. I know my sister
32	– when she was at school the only way to be creative was art. She knew she had a creative
33	side to her so she tried art – and she tried and tried and tried and after a term she realized
34	she's not artistic in this way. And she came up against a wall. When she got to university it
35	was like – oh wait there's all these different fields of creativity. She's more of an intellectual
36	artistic creative person. Her creativity is more in her head. So she was trying to be that
37	physical creative while actually she's an intellectual creative. I think maybe with many of
38	these people doing postgrad they don't know which field they are – they're unsure – because
39	obviously they've studied and gone out into the world and aren't happy with what's available
40	to them. Or they're trying too hard. They're studying too hard and trying to learn things that
41	should be in them already. It's hard for me – because I've never felt that way before.
Questions 5 and 6	
43	It's quite pessimistic really. You get people who are easily influenced by society and what

44	society says and thinks. Society says if you want to be rich and make lots of money you have
45	to do these certain jobs. People don't see being creative as very rewarding. So society says –
46	you can do this but it won't give you good reward. Parents will say that. Our parents put that
47	kind of pressure on the kids. I think its just a perception – they think it won't give them any
48	good experiences. They think they'll graduate and they won't have anywhere to go with their
49	degree. They don't think they'll become super famous – they just settle.
	Question 7
	No answer provided by the respondent

Career Category: Creative Students

Participant ID: CS2

	Questions 1 and 2
1	I agree with that – firstly – I think it could possibly be because its so emotionally
2	taxing and you invest your whole being – the way you think, feel, who you are.
3	What you create is an extension of you. I think more so than in other ways of
4	working. Traditionally at Michaelis, our critiques and stuff - its not a personal thing
5	– but because you've invested so much in it. Sometimes you do feel really hard done
6	by and then emotionally you internalize that somehow and that does something to
7	you psychologically – so you are constantly feeling challenged on all levels – not
8	only academically. Me personally - that's how I feel about it. And security wise you
9	do worry its not going to be lucrative enough and how are you going to make it.
10	Especially in this country – we're all studying to be – at Michaelis the courses are
11	designed – they do try to train us in many aspects of creative work but its a course to
12	equip us to be artists. But that's difficult here because its not like in America where
13	you come out of university and the state will provide you with a studio and some
14	sort of small allowance to buy materials. You'd never have that here at this time at

15	this point. And its a scary you – you have to create that for yourself so you always
16	feel like you have to work really hard and if your not competent in the ways you
17	should be its going to be very challenging.
Question 3	
18	I think doing something trendy. If you're doing something that everyone likes. If
19	you're something that's popular at this time in art – then you're going to be accepted
20	a lot more and have a lot of attention drawn to you because you're doing something
21	people will be drawn to – and you'll have more people drawn to your practice and
22	you'll feel you are doing something right. That in turn, people will invest in you a lot
23	more easily so you'll probably do better. You'd feel in control of your practice and
24	people would respond to that and pay you for that. But it is weird – I think the way
25	we gauge success and security and stuff is strongly connected to money – how are
26	we going to feed ourselves is strongly connected to money. I don't know – that's how
27	I think. If I can't make it work – if I can't make what I want to do creatively
28	lucrative then I'm not successful in something. Whereas that's a failure in some ways
29	because you might be manipulating your creative process to fit into something – and
30	then you are failing in the truth of what you want to create. So I think that's the pay
31	off. Sometimes you will make more sellable things to compensate.
Question 4	
32	I find that in high school or primary school you write a test everyday and its like
33	“well done!” and you get older and older and you get told well done maybe once a
34	year if we're lucky – after receiving criticisms every day. Sure they do say nice stuff
35	as well but I find even like from my parents and family because they don't really
36	understand what you're doing so it's difficult for outsiders to comment. The insiders
37	also won't necessarily comment because you don't want to offend or be envious or
38	whatever's going on – but you don't get as much recognition. I guess as you get

39	older you're supposed to give yourself the recognition but its really hard to do that.
40	As you get older you have to create – you're constantly trying to do something new
41	and fulfilling and something that has a purpose in this world and you constantly
43	want to learn from what you make and give something new to the world. As you get
44	older that gets harder and harder because you've got so much behind you've made
45	so much – how do you top that? If you do something really brilliant in your career –
46	like the best artwork and you've won a huge award then how do you top that. And
47	I'm sure that can make you feel insecure.
Questions 5 and 6	
48	I think at this point where – right now how I'm feeling and thinking about the end of
39	the year – we've gone through 4 years of intensive work and I've gotten quite lost in
50	that. And I need some retrospect to realize what a big thing that was. I'm the second
51	person in my family to get a degree – that's a huge thing in my family – but right
52	now I just feel ugh it's a piece of paper. Mentally I don't feel this is a big goal
53	anymore – but next year I'd probably get a sense of that. I think you probably
54	wouldn't feel that way because you've become so jaded by it – your involved in it
55	all the time so you'd lose perspective. So you wouldn't give yourself a pat on the
56	back. I was incredibly ambitious in first year – I was following my heart and decided
57	to follow art because it was my passion in life – I never thought about what I wanted
58	to do as a career but I always fantasized about being an artist – so I sort of always
59	knew I wanted to do art and I thought - if I don't do art now then I'm never going to
60	do it – and ill neglect my talent – so I decided to study. To disguise it I said – I'll do
61	this this and this – first I'll study then I'll be an artist then I want to be a gallerist
62	because they make lots of money – and I want to have a very stable career and life.
63	Now having gone through this whole process of studying at Michaelis – I don't
64	necessarily want to do that anymore. My goals have changed. I don't necessarily

65	want to be a gallerist I won't necessarily get fulfilment from it.
Question 7	
66	It feels so good when you're doing it – touching what you work with – and when you
67	see it done and you see something you really – its a very personal fulfilment that
68	makes you feel really good. I think every person can access that. I believe everyone
69	can be more creative and it should be encouraged.

Career Category: Creative Students

Participant ID: CS3

Questions 1 and 2	
1	The problem with competency – with art you know its such an abstract thing – not a
2	mathematical equation that's right or wrong. You don't know what's right or wrong
3	so you can never be considered competent in other's eyes. Nobody is ever going to –
4	there's never going to be a time when everyone agrees you are this or that – and that
5	makes you feel incompetent. When you look at what your peers are doing you
6	might feel – this person's doing so well. My thing's looking so shit. When you look
7	around you – they all work together.
Question 3	
8	When you make something that really feels worthwhile and you like it and enjoy it
9	because it really is a part of you – it's like your child. Its something you can be proud
10	of obviously everyone likes to have something they can feel proud of – its also a
11	reflection of them. That's the best part of it - if you're happy with something you've
12	created. And it also pays off something that is clear for you. For example the project
13	I'm working on now - I'm not working in the way I'm used to working and I
14	complain all the time because its so ugly and so hideous and so not like the kind of
15	thing I love to make and I think why the hell am I doing this. But since I've started

16	doing this I've started enjoying it and it does reflect the past year I've been going
17	through. It hasn't been an easy smooth road while previously it was much better. So
18	a friend was also saying to me 'let the meaning come through your work'. Your not
19	producing an idea or a product – you are producing something else.
Questions 4	
20	I think to some people who don't understand art the way artists do – or appreciate it
21	the way artists appreciate it – it can be indulgent. But its – there's a lot of art made
22	for art's sake and for artists who appreciate that thing and the dialogue that happens
23	within that world. But for other people – others who don't necessarily know art –
24	they'll probably look at my work and says what is this. Where's the painting on the
25	wall that shows my grandfather?
Questions 5 and 6	
26	I think it's also got to do with where you're. In first year your goal might be to do
27	well at the end of the year and if you attain it, all will be lovely. But like right now
28	I'm actually scared of attaining my goal – I would be happy but 'd also be scared
29	because what then? There's maybe going to be an even more difficult to reach. So
30	there's like a fear and a... I don't know – maybe their idea about not feeling good
31	about after they attain their goal is because they feel scared of what might happen
32	them. Either that or their hearts aren't really in it. If I'm not bothered about mowing
33	the lawn then succeeding at mowing the line won't really change my life.
Question 7	
34	Its such an exciting thing when you discuss ideas with other people and its nice to be
35	able to dream like that – whether you can do it or not – whether you make it or not
36	you can just think – is it possible and is it possible. Not worrying about is it practical
37	– you just dream it. Its appreciated for the idea – or just appreciate the idea without
38	needing to do what Jeff Koons does and suspend a train from crane.

Career Category: Creative Students

Participant ID: CS4

	Questions 1 and 2
1	I think because it is such a small community and environment it is very competitive –
2	only the very best will – very few will make it. You've got to somehow be each
3	other's friend while all the competition is going on. You've got to sacrifice a lot of
4	what you are if you want to be in that industry completely. You've got to decide
5	whether you really want to go there - sacrifice morals and values and how you work
6	– everything. In terms of being a commercial artist.
	Question 3
7	It's an adventure. It's mysterious. You don't know where its going to take you and
8	often your mistakes will take you where you want to go. And you begin to love
9	them – that's also giving you a sense of self worth.
	Question 4
	No answer given
	Questions 5 and 6
10	I also find that maybe the insecurity inspires you to continue and that as soon
11	as you're secure you're going to stop creating and your most creative moment is when
12	you're going through this emotional turmoil. And you've got all this energy to
13	express and I think – for art to exist we've got to be in the subliminal space between
14	feeling insecure and falling off the cliff because that's the area where I think our
15	creative process comes from. Coming into art school you don't give – there's no aim -
16	you're an artist now you've got a job. It's not like being a doctor. As an artist we can
17	go and do something completely different – so you don't have a defining role. The
18	idea is everyone thinks this is a very indulgent degree because you're just following
19	your dream, following your path and so... I think other people think its indulgent

20	and you can see why people would feel that because it's completely strange. It also
21	could possibly be – I know we said that the art world is less competitive but its less
22	competitive than in business and stuff. My sister's boyfriend is an actuarial scientist
23	and his workplace is incredibly hostile because they're all competing to be the best
24	and everyone's backstabbing and kind of – not genuine about how happy they are
25	for you and stuff because I think its a lot more competitive. In this realm its so much
26	more open and less competitive. You can't really compare. I think that would maybe
27	make you less ambitious in being goal orientated – you don't necessarily know
28	where the goal will take you. Its a lot of negative – I wish it was more just positive.
Question 7	
	No answer given

Career Category: Creative Students

Participant ID: CS5

	Questions 1 and 2
1	It's very much part of the creative process – its how we work as artists. Art is about
2	relinquishing power. It's about relinquishing control. Its about going inside yourself
3	and finding that mystery that needs to be explored. And that's a very unstable and
4	unsettling process. It's very, very frightening and it's very personal. I think it takes a
5	lot of courage to do it. I don't think its very easy I think there's a lot of potential for
6	judgment – when you put your heart out there – when you put your work out there
7	It's expressing who you are in a very fundamental way and that's scary. Every time I
8	show my work to people I feel that – I mean I feel amazing when people say yes this
9	is awesome I really like this piece of writing – I really – it really moved me. But I
10	don't feel like I get that much. I don't feel like I get a lot of people saying I love what
11	you're doing. And that's painful. And maybe its because don't love what I'm doing

12	enough and I'm learning to love what I'm doing. I throw away a lot of my work
13	because I judge it so harshly. I am my own worst critic. I'll be so critical of anything I
14	create and say why its so stupid and why it doesn't work and why its not good
15	enough – and then I think anyone else's view – if someone says ten positive things
16	and then one negative thing – my mind will leap onto that one negative thing and
17	use to to confirm the feeling that I don't have great talent. Even though in my heart I
18	love doing what I'm doing and I want to be celebrated for it and appreciated for this
19	gift – I feel sometimes like my stuff is just useless.
Question 3	
20	I think very much – it's just the dream. Its the feeling I get when it touches people –
21	when it moves people in some way. There's definitely personal satisfaction in doing
22	something cool – when you've written something amazing I'll think – wow – I've
23	created something so cool – I love what I've just created I love what I've just done.
24	And I just have this deep sense a knowing of when something I've done is going to
25	be good. Its like I'm channelling something – more than me – and I know I'm
26	fulfilling my purpose on earth you know? So that feeling of being alive and happy in
27	a way I just don't most times. I'm thinking about one writer who feels a sense of
28	absolute ecstasy when she's writing like a dervish – and then the next morning she
29	wakes up and feel very ordinary and she has feet of clay. That's the experience for
30	me of being artists – of creating stuff. You go from feeling very amazing when
31	you're in the spotlight – to feeling just like a very lame human being . And the world
32	doesn't care. The world moves on. The world will tell you oh yea that's great but –
33	It's a very tiring process.
Question 4	
34	They may be disillusioned – having experienced more of the “real world” and its
35	response to their work.

Questions 5 and 6	
36	The only way I can relate this is to say I don't really relate to saying a goal
37	orientation. I don't think about the future as some people do. And I think part of
38	being is good is focusing on now – instead of trying to control things – getting things
39	the way you want them later you kind of say well what feels good right now – and
40	that's – you sacrifice everything for that moment. And if you see all the narratives –
41	all the movies and stories about performers – you'll often find people who sacrificed
42	everything – their personal relationships, their finances, their health in order to
43	experience that moment on the stage in which they are transformed – in which they
44	transcend. I think it's quite a spiritual thing. My goal is usually about making
45	something that – well I guess my goal is to be really popular and famous and
46	successful and celebrate my works the way I celebrate other people's works.
Question 7	
47	I think that's it. I want people to celebrate me the way I celebrate Francis Ford
48	Coppola or Aldous Huxley – because they've got amazing work they've done and I'd
49	love people to see me in the same light. Because I've got this gift – that's what it is I
50	feel I've got this gift inside of me that I want to share and I couldn't do anything else.
51	So maybe these people don't – aren't exploring themselves right – I don't know.

Career Category: Creative Students

Participant ID: CS6

Questions 1 and 2	
1	It's the nature of the qualification. You can't just apply for this job specifically. Its more
2	you have to be a wheeler and a dealer – find certain skills you're good at and then
3	make it work. It's not like its set out for you. There's kind of this weird thing – a

4	dialect between people who see the arts as this kind of elite thing and then feel not
5	competent to discuss it because they don't have an arts background. In the same
6	sense I know that I'm competent in what I do but I feel that this course – because its
7	not – I mean it does teach us lateral thinking but it doesn't teach us a specific skill. So
8	I wouldn't say I'm particularly competent but I know that I have a skill set that is
9	kind of bent to lots of different things. But I feel that if you don't have a creative
10	schooling its kind of hard to understand that. You speak to someone about art and
11	they'll have no sense where you're coming from. And that's quite disturbing. So it is
12	this kind of very specific academic thing that you learn and the rest of the country –
13	what they think of art is just so different to what it is. There is a market but it's just so small.
Question 3	
14	Really its about making yourself happy first – rather than meeting other people's
15	expectations. Its like – I want to get to a certain point – and I'm like – and I won't
16	feel, like, accomplishment if I don't get to that point. I guess the doubt that follows
17	you – either from yourself or other people. I don't tend to doubt myself that much
18	and the longer I stick to this path the less it bugs me what other people think. But
19	that's probably the most difficult things. When you let that creep in – that kind of “what if?”
Questions 4	
	No answer given
Questions 5 and 6	
20	I'd say yes – its kind of hard, I'm struggling to answer but if you work hard at
21	something it definitely will open up opportunities. So I feel yes it will – I don't relate
22	to that. It's kind of hard to relate to. You can either work for your goals or for
23	someone else's. I also think its sad that a lot of people feel they have to choose
24	between either a career or their creative selves – that they have to make a choice and
25	that it has to be definitive. And I don't think it does. You can still keep it going. In

26	some kind of capacity.
Question 7	
27	I think mine's different. Its like I know what I don't like and that's how I know where
28	I'm going to go. The way I go is learning what I don't like – and obviously other
29	people's opinions change as you go you feel more confident as you go and more
30	accomplished. Its scary thinking – what if you don't ever get affirmed again – out
31	there in the big bad world?

Career Category: Creative Students

Participant ID: CS7

Questions 1 and 2	
1	I think the word competence is an interesting one – I don't feel I have any issue with
2	competence myself - I'm interested in why people would say that because you don't
3	study towards a specific issue – hoping to secure yourself as a practicing artist. I still
4	consider us pretty competent in the skills that we've learned – whether they're sort
5	of technical skills or intellectual skills or academic skills. I think there's a lot of lateral
6	thinking skills as well. I think people have very linear ideas of what we do, how we
7	see ourselves and what we do. Although you need to make a choice between
8	making cool things and being secure in business unfortunately. In one capacity or
9	another. I would say I feel pretty in control to a certain degree. I'm aware that that's
10	going to change but at the moment I have the idea that I can keep doing what I'm
11	doing. I feel that at the moment it is quite stable – but because I'm moving on from a
12	degree and onto other things – out of this kind of safe environment that we're in
13	now there is kind of fear – the things that you want – studying – specifically for the
14	galleries and being an artist and that's what I want to be. And when you think the
15	percentage of people who make it into galleries that's pretty intimidating for me –

16	because that's what I want – and I don't know if that's like so completely unrealistic.
Question 3	
17	Its sort of satisfaction with building your own thing. You learn your own language
18	and your own way throughout your own practice – and that's your way. You've
19	never adopted another – I mean obviously you did in some way or other to get to
20	where you are but...
Question 4	
	No answer given
Questions 5 and 6	
21	I think – I get a small sense of novelty out of knowing I've reached this point – so I do
22	think I'll have that. But I don't think I'll feel fulfilled. I just know if I'm not doing this,
23	I'll feel a sense of guilt. So its not like doing it for a reason - but avoiding how I'd feel
24	if I wasn't. I know that when I'm not doing art I'm always feeling that I should be.
25	That's what I mean. If I'm not, I just feel guilty about it the whole time. As long as
26	I'm doing this I don't have this sense of guilt all to myself. Because that's just what I –
27	I enjoy making things. That's something you have to learn at this school – you
28	constantly seek affirmation from lecturers – and obviously the whole point of
29	coming here – one of the main things you learn is how to be self affirming and not
30	listen to what other people say. You have to learn how little you can live with to keep
31	going forward. My parents always told me – everybody had this idea I would be
32	good at computers or computer science – my dad's an engineer – so I always got a
33	lot of affirmation for that and I was the logical one – the reasonable person – and I
34	applied for engineering and my dad was so happy but I realized I don't want to do
35	this – this is what I wanted to do.
Question 7	
	No answer given

Appendix P

Field Work, Focus Group Transcripts – Professional Creative Artists

Study 2, Focus Group Transcripts – Professional Creative Artists

Career Category: Professional Creative Artists

Participant ID: CA1

	Questions 1 and 2
1	I'd separate it into two categories – the first thing is that creative pursuits attract a
2	certain personality type that is more prone to drama and therefore more prone to
3	feelings of insecurity. And the second thing is it's a reflection of reality because they
4	do work in more unstable environments. The odds of success are much less. The
5	average actor earns less than the average waiter in the US. I think that's a world
6	wide thing. The cliché of the father disapproving of the daughter becoming an
7	actress is firmly grounded in the reality that you'll end up being disappointed and
8	crushed by reality. And that's what happens to a lot of actors – after a few years they
9	go into advertising – after they've had their dream shattered and turfed out.
10	Very much so – for me it started when I was very small and my efforts to kind of
11	manipulate my social situation to my advantage was why I ended up in
12	show business – you create a bubble around you where people – where you are safe –
13	probably as a by-product of feeling very isolated from the other kids. It kind of
14	became an identity – a way for me to feel a safe space between myself and the other
15	kids – if I were to tell them jokes or show them magic tricks or entertain them – were
16	to be some way of being able to avoid being bullied or subjugated by the social
17	group I was in. Three years old was the first time I remember of consciously trying
18	to make adults laugh in order to seek their approval. As soon as I felt that approval –

19	a light switched on. Suddenly I was a normal kid. I could feel the approval coming
20	from all different directions. I was like "I can surf this wave". Things feel warmer
21	when you're basking in the glow of approval. That's what its all about. You'll see a
22	lot of similarities with actors who make it really far – if you look at Charlie Chaplin –
23	kid who had the world on his shoulders from an early age – it was a way he made
24	the world safe for him when he was very young.
Question 3	
25	I think its a very passionate – it can attract a very passionate person who feels very
26	strongly and is often addicted to the kind of emotional highs one can experience
27	through show business. So you – it can be a very beautiful field to be in – its also very
28	appealing to the ego – because you are the centre of attention and when everybody
29	claps they clap for you – so there are a lot of rewards. Also you can become
30	unbelievably rich. So if you are amongst the very small percentage of people – and
31	doing a very small amount of work – in theory. You don't have to be at the office
32	every morning from six until six at night – as you would if you were a banker. As an
33	actor you just turf up, give your creative interpretation of what you think the writer
34	has written and then they go – oh you're so talented or not. So you do have to work
35	– but its a different thing. So the rewards can be very high. You fall in love with the
36	job as well – everything else feels hollow and empty without it. Some soldiers fall in
37	love with combat and they need to be in combat all the time. Some – a lot of actors
38	feel they can't exist anywhere else – they can't exist in another field. They get
39	addicted to the lifestyle and the highs and lows that come with it.
Questions 4 and 5	
40	No – I've never felt that – for me personally – that I would not be capable of doing
41	something. I've just felt that I haven't been socialized into doing it – I didn't come
42	from a background that encouraged me to do it. I was never socialized into being

43	good at accounts or into being interested in science. Though I can see from my
44	family I would have been good at it if I had been raised in that way.
	Question 6
	No answer given
	Question 7
45	I think that a man in the traditional sense – there's always something dubious and
46	suspect about a creative male in this male dominated hard nosed business driven
47	military oriented world. If you're going to put Brad Pitt up against So or a big
48	Rugby player you know who you're going to bet on. He's at the pinnacle of his
49	creative field but there's something slightly suspect about... I think men when they're
50	creative feel they are stepping outside of their socially designated roles as
51	breadwinners at the helm of industry moving the country forward – or whatever it is
52	men are supposed to do.
	Questions 8 and 9
53	Either they're aiming for the wrong thing – I don't see how you can have a goal that
54	won't give you what you are aiming for. For me – I've been lucky to have a run of a
55	couple of years when I've been able to pay the rent regularly and that's nothing short
56	of a miracle compared to when I was younger and buying a meal was a massive
57	problem. I don't relate to that at all. I think I've just been able to be stable and exist in
58	society as someone who doesn't have to have a sense of shame about what they do –
59	I think that's a massive accomplishment and I draw great satisfaction from it. I gloat
60	– I really do.
	Question 10
	No answer given

Career Category: Professional Creative Artists

Participant ID: CA2

Questions 1 and 2	
1	I think generally most creative people are kind of flighty – if they aren't feeling
2	approval its because – in my case – I change from day to day. If I have a massive
3	dream today and next week it will be something else. So its never a case of people
4	saying yes I support you 100% because it changes too often. So appraising what
5	someone is doing is completely useless because it changes too often. I know by now
6	that in a week's time my problems will be completely different. There's never really
7	one big dream for myself – I've never had one big dream because it changes too
8	often. Otherwise it becomes boring. If there's only the one thing... actually that's
9	pointless – I don't like that. So I'll lull myself into a false sense of security about that
10	being my dream so that I can occupy my dream now – so I can use my energy on
11	this – then I'll try something else. But its not real – they're like story lines that are
12	always changing – so to have proper security or proper approval – to be plodding on
13	your path towards your goal – its an illusion. Athletes are very structured in what
14	they do – so they set out to do that and people can support it. But people like me you
15	think – ok maybe one day you'll have your own TV program but you want to do that
16	– and this and this – so its impossible to support someone who doesn't really know
17	where they are going. Going round in circles in your own head really..
18	I seek approval if its from something very localized – but then afterwards I'll take
19	what they say and I'll disregard it because it doesn't coincide with what I wanted to
20	hear. Maybe just temporarily – in a day – this is so exciting – we have a moment
21	together and then it's over. Approval is an illusion – you only really need your own
22	approval and only temporarily. Because everything is fleeting. So having a long term
23	goal – its not really the point. Being in the moment – in the zone of where people are
24	flowing. That's the point. To have security is really just – having a security base of

25	money or a place to do your stuff – but creativity is a storm. It can't be controlled or
26	secured. Because then it's not creative. Its like the antivirus to creativity – control,
27	security – ugh I hate that stuff because - that's the walls of the box we create.
Question 3	
28	Instant gratification. When you're doing what you do when your creative – whether
29	it's knitting dolls or making wine – when you're doing it – that's when you're alive.
30	Everything around that is just a case of getting back to that point. Those things are
31	just supporting roles for what you're doing. And if you could just stand there and do
32	that forever – that would be fine. If you could do that with all the other things you
33	have to do – that's fine – as long as you're in the zone. Its like you're possessed. Its
34	current – being present in your zone.
Questions 4 and 5	
35	The goal I'm supposed to be achieving – everyone else assumes is some kind of fame
36	– so other people assume this is something you want but as soon as you do those
37	things you're pandering to someone else's needs. That whole achieving thing of “look
38	what I can” do becomes a sort of a trap because then you have to conform to
39	something rather than just being in a better place to be in your zone. Its not about
40	levels or hierarchies or echelons of achievement it's really about being in your zone. I
41	wouldn't seek those sorts of things at all.
42	That happens a lot. From – three aspects – your employer – or if you're self employed
43	– or perhaps a parents or something – you're looking to them to see – am I doing
44	something right – am I going the right way. Am I doing it right. Most of the time our
45	answer is no. Colleagues or peers or people who don't matter will tell us all the time
46	– oh look that's amazing that's fantastic look how amazing you're doing and that
47	opinion is disregarded because you have no weight in measuring that. Our own
48	opinion is disregarded most of all – so we look to someone else to measure our

49	success. Our way of prioritizing how to measure that is completely screwed. You
50	look at those around you and you expect them to tell you if you are doing it right or
51	not instead of checking to see if you are in your flow.
Question 6	
52	When I give you something and you like it – that's it. When someone sees something
53	I make and they like it. That's it. I could make the most beautiful thing that's
54	amazing and everyone thinks its fantastic – when the person comes back and looks
55	you in the eye and says I enjoyed it and you know they're not lying – that's fine.
56	That's it – that's the end of the day. That's all it is its so simple.
Question 7	
57	Generally being creative is a bit iffy and not very structured or organized. Men are
58	expected to be masculine, structured organized disciplined, women are allowed to
59	be flighty and creative. For a man to be in that position – its women's work. Maybe
60	they're emasculated because they're creative. It's not something done.
Questions 8 and 9	
No answers given	
Question 10	
61	It's temperamental. Like a wave – ride the wave up and down up and down all the
62	time. You're constantly fighting in your head – and the whole artistic thing – there's
63	no right or wrong. I might like something – someone else won't. So even if I make
64	something great – I'm so sensitive about it – being well received. Its like a personal
65	attack – you're doing something from the soul – you're so vulnerable. All I want to
66	know is what do you think about that thing that is my whole existence right now. Its
67	these huge extremes. There's no grey area – its always about when am I going to get
68	back to that space and any time you're hindered by administration or chores or
69	things you don't want to do – hate that. Angry, miserable moody. Then you create

70	and you're fine.
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Career Category: Professional Creative Artists

Participant ID: CA3

Questions 1 and 2	
1	I think its because when you create, it's the ultimate vulnerability – its very
2	personal because you're delving down into the depths of yourself and saying this is
3	who I am and this is what I think and this is what I want to contribute so the risk of
4	judgment is huge – and its not just judgment on the work itself – its judgment on the
5	creator of it – and if its a creative work its personal – its a judgment on that person.
6	On their artistic – just sense of - now I'm tangling my words a bit – I think there are
7	very few things as dear to us as our sense of beauty and art – so when you create
8	you are putting that out – this is what I hold dear and what I hold valuable. And
9	you're putting that our for the world to see – and you're inviting judgment on it. So
10	that's how I explain people feeling vulnerable.
11	As that relates to me – I think I've been really lucky in that I've felt incredibly held
12	and affirmed the whole way through my path. I've – for whatever reason had a very
13	warm reception within this arena and I feel like people have made space for me. I
14	feel as though its almost – there are so many overlaps - when they do that – I feel
15	affirmed, I feel I have space, I feel I in turn am able to explore more, push more, be
16	myself more. Its such a cliché you know – be yourself – the more I'm able to do that
17	the more I'm comfortable – the better it is. I think – I'm just rambling here hope that's ok.
Question 3	
18	Losing that mind part of it and being very much there and watching – for me the best
19	work I do is when I'm so present. I'm just watching and for blessed moments just a
20	channel – and I can just sense what needs to be done. And I'm getting better at that –

21	that's what makes the best creators – the ones able to open themselves completely
22	and take themselves out of it. And I know what I'm saying is contradictory – I've
23	just said that creating is the ultimate putting yourself on the line – but at the same
24	time for me the best times have been when I can – and I'm just realizing this as a
25	speak – when I can both be a channel – but have this energy channelled by me – so its
26	very much me but its what's underneath it as well – God or whatever you choose to
27	call that energy that's greater than us.
Questions 4 and 5	
28	If at the time you feel insecure and scared then you shouldn't be doing that. You
29	shouldn't be pushing yourself to go to those places. There have to be moment of
30	glory and utter – ah – this is what I'm supposed to do and this is why. And its ok if
31	those times are sprinkled with insecurity and fear – but it can't be fear all the time. If
32	that's what you're coming up against day after day then get out of there - is what I
33	see. It doesn't make sense to me. You've got to be able to justify and give an answer
34	for yourself – to say – yea it's terrifying but there's this redeeming factor. If you can't
35	say that – if you say I'm just pushing pushing – I'm sure there's this good
36	place at the end of the road – then you've got the wrong path. Though the flip side is
37	– if you are going through this pain and fear and insecurity – saying I feel compelled
38	to do this – I couldn't be doing anything else– then that's ok. But I think the
39	individual has to – when it comes to artistic creative realms, you have to know why.
40	You have to know that's what you want to do. You have to be good.
Question 6	
41	Generally I felt quite secure and appreciated and loved. And in talking about this its
42	quite lovely because I'm realizing how much I owe my community for giving me the
43	space to develop the way I have – but believe me there are times when I feel very
44	small – and its generally when there are other creators who have a lot more

45	experience than me are working with me. This is when I usually have the worst time
46	because I want to be good – and as soon as you want to be good – you just sabotage
47	yourself. So that's generally when I feel it and when I think I'm probably doing all
48	sorts of things wrong.
Question 7	
49	I don't really know – if I had to guess – I guess I'd say that maybe society requires
50	that men are more – masculine – controlling in their way of being. There's less room
51	for a man to make mistakes and explore – while women have that chance more
52	easily.
Questions 8-10	
	No answers given

Career Category: Professional Creative Artists

Participant ID: CA4

Questions 1 and 2	
1	I think its general quite scary being a creative artist – I think you have to be willing to
2	put yourself on the line a lot – I think you have to be willing to accept criticism and
3	be open to pushing boundaries that make most people afraid. I think if you're
4	pushing your boundaries as a creative artist you're probably doing something right.
5	I think a lot of people in other careers seek security, seek control in their lives a lot
6	more than creative people – creative people are willing to – it just reminds me of this
7	idea that every good has a bad and every bad has a good. The enjoyment, the
8	excitement, the flow that creative people feel – I think relates – has the – requires of
9	them they face their own darkness at the same time and I think a lot of people are
10	afraid of facing their own darkness – and that's why they don't do it.
11	Sure – all the time! I think my life has been very much an oscillation between seeking

12	security and then going off and dipping into my creative potential – my creative self
13	– and I find that every time I do dip into my creative self I feel happy. I feel a lot
14	more fulfilled – but I also feel a lot more fear. There's that reality that if you're not
15	growing, if you're not changing you're stagnating. And I think the key is to keep
16	pushing yourself on to new things – to new boundaries, to new areas – so you keep
17	on growing – and being willing to accept that kind of fear.
Question 3	
18	Clearly its the feeling I get when I'm doing what I'm doing – its the sense of energy
19	and engagement and passion and creativity – its a feeling – a feeling that I am
20	making something cool – and its something that affects me on so many different
21	levels – in my body – I feel excited – you know – I'm excited to tell people about it
22	and share it – and I feel this sense of pride. When I'm not doing it I feel – dead. So ja
23	there's a feeling of fear but there's also a feeling of being dead that comes when
24	you're not feeling that fear.
Questions 4 and 5	
25	I think competence and security and those things are very much linked up – its a
26	good question – a sense of competence – I think – I think because you're pushing
27	boundaries and doing something new – its hard to feel competent in it – that's the
28	essence of it. If you feel really competent and secure in something – its probably
29	something you've done before. So you probably are not in the kind of creative space
30	you need to be. So I don't see it as a negative – I see this as a positive aspect of being
31	creative – is feeling this sense of sometimes incompetence. I think accepting it. A lot
32	of people do feel incompetent all the time but creative people are wiling to face their
33	own feelings of incompetence but to create anyway. They're able to feel lousy
34	but do it anyway.
35	Just about every day of my life I think. I feel its hard to be me – I don't know what

36	I'm saying. I think it comes in waves. There are moments. When I feel – what am I
37	doing – this is all a big disaster its a complete failure. I once saw a stained glass
38	window in a place called the Goetheanum which is a place built by a guy called
39	Rudolph Steiner who was very much into creativity and people's creative potential.
40	On the one side of the wall - its this big stained glass side of the building – and on
41	one side you've got this portrayal of this person – these stairways leading down to
42	the depths and in the depths are all kinds of monsters and torment and its scary and
43	horrible – and on the other side – a set of stairs- the ascent of the light. And this isn't
44	just a biblical image its more a way of saying that every human being has this cycle
45	in their lives of the decent into the darkness and the fear and the unknowing – and
46	this ascent into the light and the fulfilment and connection with yourself. I think
47	every creative person will be traversing that – and very conscious I think – I think
48	everyone traverses that but creative artists will be particularly conscious of the fact
49	that they are traversing. Sure.
	Question 6
	No answer given
	Question 7
50	Men feel a stronger attachment to showing themselves to be competent or capable. I
51	think for men it's a stronger fear to challenge their own sense of competence. To take
52	on things where they might look stupid – because men are not allowed to take on
53	things like that by society.
	Questions 8 and 9
54	If these guys are older – they probably feel the same insecurity and lack of control
55	but I think they're resigned. I think when you're younger you're probably more apt
56	to believe that somehow your going to achieve this thing – I've got a friend whose a
57	really successful actor and he's achieved a lot of his dreams and worked with some

58	of the top actors in the world and achieved these things – and I remember him
59	saying – I wonder if I'll be happy when I get all the money in the world – because
60	he's got this to achieve and he's still not feeling content – he still feels anxious,
61	fearful. Maybe that's part of the maturity process is accepting that a lack of control is
62	going to be part of your life.
Question 10	
No answer given	

Career Category: Professional Creative Artists

Participant ID: CA5

Questions 1 and 2	
1	Society doesn't really perceive creative jobs as a career. People think – when you tell
2	someone what you do – they think “oh they draw pretty pictures” or “they just
3	dance around on stage” but they call themselves an artists because its a fancier way
4	of saying “I like poems”. It doesn't get enough respect really.
5	I think that ties into the security and power thing because social approval is so
6	important. I got to a point where I felt really bad about what I was doing because I
7	could see it on people's faces when you say what you do. You get to the point of
8	feeling ashamed of what you do. And feeling that – we'll I've invested a lot in this
9	path and the only way – I often regretted this path but well – I stuck it out and
10	opportunities came. You can either be optimistic about it or pessimistic about it –
11	and a lot of people are pessimistic – and for good reason because a lot of people are
12	telling them – society is telling them they can't be successful at it. I think in South
13	Africa arts and culture doesn't get enough respect in the right way. Its known – but
14	not respected as a career. Its seen as something fun to do and not as important or
15	skilful as being a doctor.

	Question 3
16	They know they won't fit in any other career or working environment because they
17	are different. Also it could be they don't – I mean – if I'd been working for 10 years in
18	the cultural sphere of life and I still wasn't happy – I'd be too tired to go back and say
19	let's study psychology. You just kind of give up and say – well there's no space in the
20	world for creative people and I'm a creative person. I'm just going to have to deal
21	with it. Because I know I'm not going to be a doctor so I just have to make peace with
22	it and say – at least I'm doing what I love. I may not have the money that I want or
23	the house that I want. I'm still paying off my loans but I'd rather be here than sitting
24	in an office day after day doing the same thing feeling bored with life.
	Questions 4 and 5
25	Its weird because usually if someone has a goal – that's their goal and they will
26	achieve it. That's something you say when you have a dream – my dream is to do
27	this but I'm not too sure it will happen. A goal is like – I will work until my fingers
28	bleed to get this goal. So it's weird for them to think like that. Are these the people
29	who've been working for a couple of years? If its the students...
	Question 6
	No answer given
	Question 7
30	It could have to do with the fact that depending on which fields they are in – there's a
31	very small market or area for men to be creative without being seen as weird or gay.
32	Whereas women are seen as creative beings. They make things look pretty –
33	themselves look pretty. Whereas men are meant to be the provider – stable – stable
34	job, income blah blah blah and then they're in this artistic field where they don't
35	have that – and I think in society they can get a lot of flack for that. Society perceives
36	a certain thing about them and it gets them down perhaps.

Questions 8 and 9	
37	It could be just the younger people don't have experience so they're more naive. They
38	think they're going to achieve world fame and security and blah blah blah – but its
39	not that easy. There's a very small niche to day in the market for creative people and
40	there are only so many famous artists and fashion designers and its a small market
41	so that niche is very small. If you want to become famous you have to have
42	something very unique – very different which is difficult. I think the students have a
43	little but more of a sense of possibility. They don't realize there are a lot of creative
44	people with the same ideas most of the time. But the older people have experience.
45	The markets and niches are small and without something really different to offer
46	they won't have that fame, fortune, security.
Question 10	
	No answer given

Career Category: Professional Creative Artists

Participant ID: CA6

Questions 1 and 2	
1	Being an artist or someone who creates things is a very lonely and isolating path.
2	You're constantly checking in on your inner compass to guide you. I've turned down
3	so much work the last year it makes me feel sick... but I think you've got to trust that
4	inner voice and only act if something feels right. Neil was directing District 9 – and
5	Peter Jackson who was the producer kept telling him he should be doing things
6	differently – we shot about 5 hours worth of footage that Neil didn't want to because
7	Peter insisted – and we wasted about 5 million which was a lot on a small budget
8	film. Neil said that nobody expected it to do so well and Peter sent him a poster
9	when the movie blew up saying “who would have thought”. So Neil puts that on his

10	wall now to remind him – I mean can you imagine the pressure he was feeling? So
11	he uses it to remind him to just stay true to what he feels. I think that's crucial. This
12	year was big for me in terms of turning down work. Its tempting cause they wave a
13	lot of money at you and there's this fear you know? Its like – am I gonna run out of
14	money and starve? But I think – doing A-Team was the closest I'll come to kind of
15	making that compromise – and only because I digged the character.
Question 3	
16	You know there's never been anything else I thought I could do – I've wanted to do
17	this since I was ten years old. I think for people who live this kind of life that I've
18	spoken to – they generally had a total drive to do what they were doing. People like
19	Simon – my ex partner were always trying to control things. Trying to make things
20	work – and I still say he's one of the most talented people I've worked with – but I
21	think it comes down to ego. If you're doing what you're doing for ego reasons its a
22	waste of time. There were a lot of days when I would wake up on set and just not
23	want to go in to work. I know that sounds crazy but.. the thing that made it – that
24	makes it worth it for me is getting to do these characters and see people laugh – its
25	the only time I feel like I'm really doing what I'm meant to be doing.
Questions 4 and 5	
26	I think insecurity is the biggest trade mark of – certainly actors in my profession and
27	a lot of filmmakers I've met. Its weird cause you get to the really high levels – where
28	people have really cracked it – and there's still this insecurity. Like – its kind of a
29	push and pull thing. One minute it's “please get out of my face” to the paparazzi or
30	whatever but then I noticed when I was with Renee at the airport in LA for a while
31	we weren't getting any attention and then she kind of went and stood in the middle
32	of the lounge and kind of – on display so people would notice her. So I think its just
33	a human thing you know? I don't feel a lack of self confidence when I'm performing

34	– I think that's what kills you. You have to be absolutely certain that you are the best
35	person to be in front of that camera. Its like everything stops and there's like 200
36	people and they're all looking at you and like “ok go!” and you've got to perform
37	and just trust that your character is good enough. Its all of those people are there just
38	for you.
Question 6	
39	I think the reason a lot of these people are doing what they're doing – like celebrities
40	in Hollywood that I meet – they're seeking the attention because they want to cope
41	with their insecurity. Like I keep trying to stay grounded and focused and not get
42	caught up in it all because its very unbalancing. I think when I was younger it would
43	been tougher to deal with but now... not really. The question is when do you have
44	enough? Because no matter how much you fill it up – if you're still empty – no
45	amount of whatever – energy, attention, and money is going to fill that void.
Question 7	
46	There's no question that for men – men are much more wrapped up in our egos and
47	proving ourselves to each other. So its harsh – its very competitive and a lot of
48	people will try to take you down. I was talking to this guy – he's a major Hollywood
49	producer – made a bunch of shows like the A-Team in the 70's and 80's and this guy
50	is like super powerful – but he was telling me that one rule he has is – never let
51	anybody shout at you. As soon as you do that – if you fight back you just carry on
52	the problem but if you surrender and say – no I'm sorry – then you're setting up an
53	energetic relationship between the two of you that you'll never be free from. It was
54	weird given my past relationship with Simon my business partner that he should
55	say that to me. The industry can be extremely competitive – and men are
56	competitive by nature.
Questions 8 and 9	

57	Ja again its just – in my experience anyway – you get older and you kind of lose your
58	power because new guys are coming up. It's a very fickle system. I'm also starting to
59	accept that its just part of the process of being in this game. The celebrities
60	I meet who've really achieved a lot – are at the top of their games and
61	still show a lot of insecurity.
Question 10	
No answer given	

Career Category: Professional Creative Artists

Participant ID: CA7

Questions 1 and 2	
1	Most of the time its lonely – you work autonomously. Every story, every idea is a
2	unique voice. So sometimes there's a lot of unique voices out there who don't
3	approve of your unique voice. I think there's less time for appreciation in the
4	industry amongst ourselves because you're busy doing what you do and trying to –
5	and I think the fear comes in when you're craft is out there. How will people take it.
6	You spend so much time getting into your head – and the moment its out there
7	you're not sure how people are going to appreciate your craft. Secondly it could be
8	some financial implications. You always think what next, what next, what next. You
9	might be on your first project and already thinking about your third project. So at
10	that moment there's some diverse feelings going around. Those are the two main
11	points. Financial instability and the unique voice not being sure it will be
12	appreciated.
Question 3	
13	I think it's more on – it's more about telling the stories that are out there. Since I was a
14	child I'd hear of a great story – I'd read something nice – any story I'd come back to

15	my parents and share that with them. Back then I'd do it a lot in writing. I'd write
16	stories and submit them to teachers and parents. My father is a great, great great
17	reader so that's where it started out. It faded when I got to varsity because that's
18	when I started business and funny thing enough – just about 3 years after I was
19	working, doing reflections and sort of post reflections with myself and I asked
20	myself one question. What is it I can do until I die and what will it be that gives me
21	meaning. Even though I loved my job I had to ask these questions. I think what
22	keeps me going right now... Sacrifices of not seeing family a lot – travelling a lot –
23	mostly, being lonely. I don't know about others but I like to sit alone and
24	conceptualize things, get them clear in my head before I go out there with the crew.
25	So I spend a lot of time a lone – which is very bad as an artist. You spend most of
26	your time alone.
Questions 4 and 5	
27	Most of the time – the reasons being maybe as an artist when you come to the
28	industry you always have mentor – or people you aspire to be. Most of the time
29	those people are very great people in terms of what they've done, what they've
30	achieved - the stories they've come up with so you always – at the back of your
31	mind, subconsciously whenever you do a project you always try to see first of all
32	will it change people's lives, how will it contribute to society and thirdly how does it
33	compare to the other people that walk the road. So myself I think of those things and
34	I keep on bumping – not sure if I'm not going to – I guess because there's no one way
35	of telling a story. Business people go and study to be a particular thing. But this
36	industry I'd say the majority of people mostly it's just their creativity and confidence
37	to do things. Its difficult when there's no professional standards, no institutional
38	framework so you're just wandering alone and hoping people will look up to what you do.
Question 6	

	No answer given
	Question 7
39	Most of the industries are created by men. If there's a group of men with a common
40	interest in the creative industry. As a man when I look around most of the people are
41	men. If you look at militaries, companies, everything is uniform, standard. They like
42	things to be like a template. I don't think most men like to
	Questions 8 and 9
43	I guess – speaking as a young ones – maybe at this phase in Africa most of the guys
44	in Africa – there's that sense of hope – spirit of potential amongst them. When you
45	look around the world things you aspire to as Africans – those are basic things. But
46	as Africans you want to get there. You always see as Africans you can achieve more.
47	Maybe for youngsters its just endless possibilities because things haven't been done
48	here. Most of the younger people seem to be on a path of finding themselves. As
49	they grow older – maybe the problems with modernization and younger ones taking
50	over their path – they might be struggling with the idea of how do they fit into this
51	society.
	Question 10
	No answers given

Appendix Q

Field Work, Focus Group Transcripts – Entrepreneurs

Study 2, Focus Group Transcripts – Entrepreneurs

Career Category: Entrepreneurs

Participant ID: EN1

	Questions 1 and 2
1	“I think being an entrepreneur is often about having to mundane things in the moment
2	in order to fulfil some longer-term vision. I mean that's part of the whole essence of it.
3	You aren't doing something because it brings you a salary at the end of the month -
4	you aren't getting anyone tell you you're doing a good job – at least not in the
5	beginning. So its a lonely path and – I think you... I think a lot of the time I've
6	spent as an entrepreneur was about getting printer cartridges and dealing with leaking
7	ceilings. These things had little meaning to me as such – but the feeling of building
8	something made it worthwhile. I think the other thing is you just do what you have to
9	do. Its not always about choice – its about doing what has to be done in order to get
10	where you want to go. Could be they've hit upon a kind of brick wall. This is often the
11	experience – you start with your vision and its all exciting but then you get bogged
12	down in the day to day running of the thing – and all the mundane things you have
13	to do to make it work.”
	Question 3
14	I think once you've invested a lot in achieving a particular vision, failure becomes less
15	of an option. You really don't have a choice. I mean – you could give it all up - go and get a
16	job but that's painful. You're too heavily invested. Sometimes its also just the belief in

17	the vision is so strong – or maybe you feel you have people depending on you -
18	co-workers, employees. There's a certain kind of inertia in running a business. Once its
19	going you've got investors and staff and clients and responsibilities. So sometimes it
20	stops being a choice. I know that I once gave up a business because the work did feel
21	meaningless to me. I kept on going and going until I realized I just couldn't take it
22	anymore. I think part of the reason I kept on at the time was fear – I was afraid of what the
23	alternative would be. I was afraid of leaving something I'd come to know and feel
24	somewhat comfortable in.
Questions 4 and 5	
25	Perhaps it's just more of the same. I agree... I've never been there myself but from what
26	I imagine – you've been through it all before. You know what its all about. There's not
27	much new to excite or new mountains to conquer. You may be really well established and
28	possibly successful. Even if you're not, it's maybe just a function of getting older. You carry
29	on doing what you know. You become more risk averse.
Question 6	
30	Probably inertia and necessity. Maybe because as you get older you seem to need more
31	of a reason to carry on. There's a reason why men die so soon after retiring. They need
32	something to focus on – to feel productive. But you know when I think of some
33	successful older entrepreneurs I know I think its just a habit – its engrained within them
34	by a certain stage. They just do it for the fun of it?
Questions 7 and 8	
35	If you're older you may have achieved what you set out to. So there's no real way up
36	from there – it's just more of the same. You may not be chasing goals anymore for the
37	things you used to like money or prestige. Maybe your goals change. The other explanation
38	is again just that you are doing what you are doing out of necessity. You feel too old or tired
39	to start again – to try something new. So you just resign yourself to what happens next.

	Question 9
40	I'd say their desire to still achieve their vision is too strong to compromise. Some people
41	say you should never retire – that once you retire you die very quickly – if not in body
42	then mentally or emotionally. I'd like to carry on going until the very end.

Career Category: Entrepreneurs

Participant ID: EN2

	Questions 1 and 2
1	“I enjoy the work. I think doing the spadework to get something right is all part of the...
2	and its like taking a holiday. The planning is a big part of the fun. For me definitely.
3	Checking out all the different angles and possibilities before I make a decision is
4	part of the fun.”
	Question 3
5	“In the beginning it was just a matter of survival. I'd come down, I knew nothing, it was
6	a matter of survival. Once I'd got through that stage... you get a lot out of working for
7	yourself as opposed to working for a boss. I think the business I was in I'd reached
8	pretty much a ceiling – that's the reason I sold the business. And there was nothing
9	more to strive for. I always try to – I started with doing repairs and buying parts
10	and then I was importing parts and... I was importing from China and the companies
11	there won't give you a sole agency . So I found I was importing to South Africa and
12	every auto parts place was importing from the same suppliers. So it wasn't worthwhile
13	continuing. While I ran that business I also bought and sold properties and actually on
14	Monday I'm going to Hong Kong to a trade fair to...find things to bring in. I want to do
15	it on a small scale so I can run it without staff. I've always bought and sold things all my life -
16	it's something I've always done. I've done it to survive. Even while I was with De Beers
17	I was buying and selling shares – buying and selling something.

	Questions 4 and 5
18	“I don't know. Perhaps the more you go down one line of business the more you know
19	about that line. I don't feel that way – since I'm doing this in part to keep busy – and keep
20	doing something I enjoy doing.”
	Question 6
	No answer given
	Questions 7 and 8
21	“The reason I'm going to Hong Kong now to set something up is – I need to keep busy.
22	It's exciting – I need something to keep my mind active. Its good for your self esteem to keep
23	yourself busy.”
	Question 9
24	“Its very much as I said – I like to keep myself busy, keep myself stimulated with doing
25	new things and with new ideas. As soon as I'm sitting still for too long I start getting
26	bored and looking around for new things to work on.”

Career Category: Entrepreneurs

Participant ID: EN3

	Questions 1 and 2
1	“I can understand that – if you start with a vision of having your own business and
2	“ek gaan vir niemand anders werk nie” and I'm going to do a wood thing in the factory
3	area here but afterwards you're just running around like a maniac and you have to work
4	Sundays and its very boring and the labour lets you down and Monday they don't
5	pitch and its not funny anymore. You have to do it – it's the business. The growth makes
6	it much harder – a lot of people fail when they go from being a one man band to more
7	because you can't expect other people to care about your business as you do. So it's
8	very hard to keep up the level of passion and quality. I think growth becomes mundane

9	often – most often. But if you are creating something – you're not just doing machine
10	parts. Like – there's a woman I know who creates crockery and sells it all over the world
11	I think she loves what she does – and she's thrilled about getting all these overseas
12	orders – and the power. But she's a very creative... not many entrepreneurs are very
13	creative. They start a business. If you make something you see your work. But if you've
14	got to do more kitchen cabinets – it's just more hard work. There's a very big
15	entrepreneur who does fences. Seven of his workers were stolen. The two guys
16	he had didn't know what they were doing so I got someone else. He's not having fun.
17	The bigger you get the more bureaucratic it gets, the more the admin. Also an entrepreneur
18	very often doesn't have an administrative staff. Doesn't have people to do the leg work for
19	him. He's doing it after hours and Sundays and missing opportunities.”
	Question 3
20	“They have to. Either they have to because its a big dream – but mostly – because they are
21	ideas people and they see opportunities. I've been interested to see how the Afrikaner is
22	an entrepreneur. When Afrikaans kids grow up – because they come from poverty – and
23	preaching from the national party was get a job in the railways or something and you'll
24	have a job for life and a pension and medical aid and that's it.
25	With what's happened in this country – its been fascinating to see how a guy who was a
26	clerical cog in a wheel employs fourteen people and is doing really well. Sometimes its just
27	because you have to be. They had to utilize the talents they had. They had no alternative
28	to leave the country. And they've done it. Because they were retrenched. I have a friend
29	who was working for intelligence for P.W. Botha and because they didn't want black
30	people to be involved in intelligence things they sent them to Italy to learn basic skills
31	like tiling. When he was retrenched he started a building company and made hundreds
32	of houses here. They take their interest and make it into a job. Most entrepreneurs I think
33	start when they're very young with a great idea and they kind of have to do it. Or they're

34	pushed into it and kind of make it happen.”
Questions 4 and 5	
35	“Well they're probably just tired of doing the same thing over and over again. The same
36	slog every day. It doesn't get easier as you get older – it gets harder for everyone! If you're
37	Sixty five and still dealing with your staff not turning up – its just more of the same.”
Question 6	
	No answer provided
Questions 7 and 8	
38	“I try to help middle aged women to prioritize their work. Most people I think feel a sense of
39	- they feel they'll never be on top of the pile it just never stops. You take a holiday and come
40	back and feel like you haven't take a holiday. Also perhaps when you're older you know
41	that there's not a lot of places left to go. And you're tired. Fatigue sets in. Physical and
42	emotional fatigue. I think that's the answer.”
Question 9	
43	“A lot of the time they have to – its their source of income and they don't necessarily
44	have a choice. Often people will have had careers in the corporate sector and then
45	been retrenched or left their jobs for other reasons – and they turn to creating their
46	own businesses to make ends meet”

Career Category: Entrepreneurs

Participant ID: EN4

Questions 1 and 2	
1	“A lot of - I'm very passionate about the cause but a lot of the stuff related to running -
2	you have to do a lot of stuff where you don't actually see 'x; equals 'y' but you know its
3	going towards... its kind of like a moment by moment thing too. You get into situations
4	where you feel really pressured to do a lot of things and I think sometimes entrepreneurs

5	with visions to start things aren't necessarily the ones who should be implementing the
6	operations all the time. But sometimes – I do things and understand why I have to do
7	that – but I don't really enjoy doing financial records and sending thousands of emails.
8	I do enjoy doing that when I feel called and it feels very aligned with – this is what I'm
9	supposed to be doing now. But a lot of the time I'd rather have someone who feels
10	passionate about keeping records to do that if that makes sense.
11	I understand logically why all those pieces need to be done so I just do them.”
Question 3	
12	“I firmly believed that I could do this. I had a lot of people going against me – I was
13	young, I lacked experience, how can I – I was 21 when I started this. People were like -
14	no way. But I really believed I could do it and I didn't believe what people said.
15	So I think that was a part of it – and just sticking with it. Since I was little I've been
16	doing a lot of meditation and work in that kind of realm and I really strongly felt
17	guided – like this was coming through me and it was something I was meant to
18	do so I just followed that and trusted it I guess.
19	I guess I believe if you ever have a fear – I've had to grapple with fear at a young age
20	and I think if you have a fear you have to run towards it. I just dove in and I know
21	no matter what I'll be fine. The worst that can happen in any situation is ill die – and
22	I'll be dead and that'll be fine. So I really saw this as a vision already – and you never
23	know how things are going to work out so you've just got to go and do it. And I saw it,
24	I felt like it was already done. I just had to be a channel for it to come through. I never
25	pictured in my head that it wouldn't happen.”
Questions 4 and 5	
26	“I guess its about how you see what you do. You can see things as being the same or you
27	can choose to see what's new in every situation. In my work I'm constantly meeting new
28	people and facing new challenges so I don't feel that very often. When I do I know its

29	time to recharge and I'll go off somewhere, take a holiday.”
Question 6	
	No answer provided
Questions 7 and 8	
30	“I believe that we have to drop any goals in our lives. Even with my organization where
31	we're trying to save children you have to let go of goals because we really lose power
32	if we don't. So I don't see this as a goal – as achieving anything. I'm doing what I feel
33	is right in the moment I guess. Of course there's that side that would love to save
34	millions of children and reach all the children in the world and South Africa
35	but I don't equate it – security and safety and my happiness don't have anything to
36	do with external situations. And I know that by achieve some goal out in the future
37	that doesn't equal security or happiness. People reach all kinds of goals and milestones
38	and it doesn't equate to happiness.”
Question 9	
	No answer provided

Career Category: Entrepreneurs

Participant ID: EN5

Questions 1 and 2	
1	“It's hard for me to identify with this one. I'd say they're in the wrong business? If they are
2	bored at any point or don't find personal meaning then they're doing something wrong.
3	Entrepreneurship is about passion. Ja its hard for me to identify with this. I experience
4	the opposite - most things I do have meaning because I've chosen to do them for
5	a reason and not told to do something by someone else. I don't do something if it
6	doesn't have meaning.”

	Question 3
7	“Nothing compares to the feeling of accomplishment that comes from creating your own
8	business from nothing and using learning or using skills you never had you knew you had.
9	You can do things your own way, make your own decisions and are in control of
10	everything from the hours you work to how much you earn. Although there is a
11	lack of security, there's never a lack of excitement – for me there's always something new
12	I learn every day. A lot of the time its just because I've had to be involved in every
13	aspect of the business, in areas where I never really had an interest. There's also the
14	alternative to bear in mind. Working for someone else – not being acknowledged or
15	rewarded for all you put in. Not my thing.
16	It can be daunting for me be in charge of my own success and how much I earn. I've
17	often had those moments where I feel like a failure or rather I'm not achieving enough
18	but I see those as minor obstacles. I get over them quickly. Usually I ask myself
19	“what have I done today towards my greater goal?” and the answer is most often -
20	“not enough”. That's when I feel like a failure. If I'm consistently working towards
21	my goal, doing something of value and that is moving me forward – then I feel satisfied
22	and good about myself.”
	Questions 4 and 5
23	“I think its a simple case of fatigue. People reach a certain age and their work no longer
24	excites them in the same way. As an entrepreneur by that stage I'd hope I would have
25	achieved my goals so I wouldn't expect too much newness in my day to day”
	Question 6
26	“I don't feel I can really comment on that. I guess I'll know when I get there”
	Questions 7 and 8
27	“Being an entrepreneur means you can never take it easy. You have to be constantly
28	innovating. Perhaps they've realized overt time that its a perpetual struggle of staying

29	on top but that to me is the excitement of it and what makes no two days the same.
30	also, there's no one to tell you what a good job you're doing. You've got to do that
31	for yourself – hopefully based on reality. I personally do feel an increased sense of
32	personal power and increase in self esteem when I achieve my goals.”
Question 9	
33	“That's the thrill of being an entrepreneur. There's always a new challenge. However if they
34	are not feeling that increase in power or security or approval then I'm actually
35	not sure why they would continue because what would be the point? Its can't be money
36	because security is money. To me it sounds like these types should be working for someone
37	else!”

Career Category: Entrepreneurs

Participant ID: EN6

Questions 1 and 2	
1	“I would imagine that the larger the business or the more complex it gets and
2	- this is a small business but nonetheless there's all the non-inspiring elements of it.
3	Staff management, taxation, accounts. These are necessary.. and it is tedious and not
4	inspiring and quite exhausting. I see it as necessary – but it certainly doesn't inspire.
5	I try to bring as much creativity into that as possible. About thirty percent is
6	stuff that I hate and put off and try to find someone else to do it for me. I like the
7	management but I don't like the tedious administrative side.”
Question 3	
8	“The one clear motivation for me is building up the business, wanting to continue to see its
9	growth. So success is a motivating factor. But aside from that – because there's a vested
10	interest in that's obviously – financial – emotional – but really what motivates me is the
11	choice I've made to actualize this business – to create it. To do something that's more

12	subtle than just kind of – health and fitness – and its a sector I find lively because of that
13	interaction – and that gives me a massive amount of motivation. I'm not sure I'd call it
14	motivation – its more inspiration. That's what drives me to make it work – inspires me
15	to make it work. I feel very inspired in my working environment and the interactions I
16	have with people and I feel that I have a team who are inspired. So there's very little
17	attrition in the working environment itself. But external to that its a business that has to
18	perform in a competitive environment – the fact that I'm doing this with and for others
19	is a strong motivation. I really wanted to bring what I found overseas here and form
20	something that people could experience here.”
Questions 4 and 5	
21	“I think you should always be working to keep things new, keep things fresh. Any
22	business can atrophy and decay if you don't keep injecting fresh energy into it. So
23	I think this is a real pity if they are feeling that way. I'd like to think that I will always
24	be able to keep my interest in what I'm doing – my sense of novelty or fun alive.”
Question 6	
25	“I suppose you might get tired of something, bored with something but still want
26	to keep on doing it because it's your business. “
Questions 7 and 8	
27	“I think its a very sad statement. I would – being younger and less experienced in business
28	but I've been an entrepreneur for a total of seventeen or eighteen years now and
29	if achieving your goals aren't bringing you the satisfaction you want then either
30	your goals aren't aligned with yourself or you've changed your expectations. Either way
31	it's a choice that someone makes. I'd be in a frightfully depressed state if I had to
32	answer that question. I would have compromised everything that I've done.”
Question 9	
33	“Confidence that I can address that conflict and either find a solution or steer my business

34	away from it or overcome it in some way. Knowing that hard work and creativity and
35	inspiration are the tools I can use. One of my primary objectives – my personal view of
36	a balance in life is not just about having a successful business and having more and more
37	- and with that comes more wealth, more reward but also more time spent working and
38	more stress so I've chosen to keep it fairly modest as opposed to expansive because I don't
39	want to compromise some of my other lifestyle objectives.

Career Category: Entrepreneurs

Participant ID: EN7

	Questions 1 and 2
1	A lot of what I do is a combination of loving what I do – and the
2	excitement I get from thinking about the final goal. A lot of the things I have to do to get
3	to that final goal are a pain in the ass – its having to manage your office space, staff issues,
4	logistical concerns. You do those things because you have an ambition to achieve
5	something greater so you are willing to put up with the hardship entailed in doing
6	those things. A lot of what I do right now I find bureaucratic, having to live by other
7	people's rules. But I do it because the end goal has a lot of meaning for me Because I
8	couldn't be doing anything else. I could be working for a company – but that would
9	feel much much more meaningless – not just the day to day activities but the final
10	goal in itself. So I'd say people who say that are probably feeling frustrated with some
11	aspect of the day to day of running their business.
	Question 3
12	I do this because I believe that its possible to achieve something that means a lot to me. I
13	think a lot of people have visions – but they don't necessarily believe that it would ever
14	be possible to achieve them – and they never take the time to find out. Part of the essence
15	of being an entrepreneur is a willingness to face the possibility of failure – to take the

16	first step towards the end goal. That first step – and the next one – and the next one - are
17	often fraught with learning and growth. That growth is painful and there are definitely
18	times when it can feel meaningless. You feel like you are alone in the wilderness.
	Questions 4 and 5
19	Either they have a stronger need for novelty than most people and they find it isn't
20	getting met anymore – or else the more obvious answer is they've been doing what they do
21	for so long it no longer feels new to them.
	Question 6
22	“Its hard for me to comment on that. I can theorise that they need to keep themselves busy
23	- maybe they love what they do and just don't want to stop. Novelty isn't the only
24	Thing worth pursuing a goal for. Probably they get a lot of satisfaction out of it. “
	Questions 7 and 8
25	“It may be a feeling that people get in the latter stages of their careers – depending on
26	how well they have done and whether they still feel valued by their clients or
27	their businesses. Perhaps they haven't achieved what they had hoped they would.
28	Often when you have something you want to create it's hard to ever feel that that
29	thing is complete. There's always more you want to do and wish you could have done”
	Question 9
30	“There's not much else to do by that stage. People resist retiring because it – especially
31	if you are an entrepreneur – because then your work has been such a major part of your
32	life. The two become very intertwined. So I'd say they carry on because they love it -
33	because the alternative isn't acceptable to them”

Appendix R

Field Work, Focus Group Transcripts – Business Managers

Career Category: Professional Business Managers

Participant ID: BM1

Questions 1 and 2	
1	“I think business is very much about gaining power and control. I think that's the
2	objective of most companies. If I think of my company, we have growth objectives,
3	acquisition objectives, profit objectives. It is very achievement oriented – and goals
4	are very achievement oriented. I don't think there's always a clear path there –
5	maybe these people are feeling – I think the thing is if I do well in what I'm aiming
6	for then my manager will be happy with me – he'll be happy with what I'm doing
7	and that will increase my standing in his eyes and he'll want to give me more things
8	to do and hopefully more interesting jobs and I'll – increasing my ability to do what I
9	really want to do. Usually this happens to me when I'm working in a context for
10	someone who's really going to recognize what I'm doing. There are some contexts
11	where I feel no matter how well I do I won't be rewarded for it. And sometimes
12	people will feel threatened by someone else being really good. So I can relate to that
13	in times when I felt I had a good boss and the sense of freedom to do what I wanted
14	to do and I knew it would be seen in the organization as doing a good job. Any time
15	I feel my work is going to be seen and appreciated by others I feel this way – yes.”
Question 3	
16	“Is there a sacrifice? Maybe it might be that people might be threatened by you – may
17	not like you. If you achieve well if you're successful other people might be envious
18	of that success. Sometimes my family life can be influenced. My private life – my
19	personal life because I'm putting a lot of energy into reaching for my goal. That

20	makes sense to me.”
Question 4	
21	“Its hard for me to comment on the thinking of black managers not being one.. but I think it's
22	clear that there a lot of... that black managers really aspire to reach things they've been
23	denied or that they perceived to be important. Someone who has been powerless tends
24	to seek power. Its not necessarily negative. Just part of an aspirational society. Its a double
25	edged sword. You can obtain the power but then what do you do with it? Other societies...
26	people seem to value different things. In Europe people don't value visual displays of
27	wealth or power quite as much as, say, in some developing economies. The focus is
28	different. So I think its very much a build mentality in South Africa right now. I think that
29	is bound to change in time. Once there are a few more generations away from apartheid
30	and people have had power for longer. Its the stage of the country.”
Questions 5 and 6	
31	“It's pretty common – there's a lot of competition in the workplace. People aren't going
32	to appreciate what you do. I also don't know whether – sometimes I'm working on
33	goals – I don't know whether they'll be seen as something I've done. But that just
34	says to me they are unhappy in their jobs. There's something wrong there. I've really
35	experienced this. I left the company as a result. I felt I was in an environment where I
36	was very very - everyone was trying to protect their own turf and I think most of the
37	work that was done went towards trying to protect your turf and politics – rather
38	than actually doing anything. So I really felt there was very little I could achieve in
39	this environment. There was a lot of backstabbing and people didn't want to see
40	other people succeed. When you have that kind of environment the product of the
41	work is not usually successful.”
Question 7	
42	“I think the only thing is money. I've needed to carry on doing my job, I've needed the

43	income. I needed to keep my job. For the security of it I guess.”
Questions 8 and 9	
44	“As a manager your job is to help others feel competent – you often don't have
45	someone whose looking at you and saying – this is why you're doing well. I think
46	managers often have the biggest burden in an organization of self-motivating. Often
47	you're doing stuff you don't really know the answer to – and you just have to have
48	an answer - any answer – and get behind it and give others the confidence that it can
49	be achieved. So that makes sense to me. I felt like this in most of my career – its not
50	that I haven't felt competent. Maybe these are people out of their depth. They're
51	being asked to do thing they don't know how to do. I think you hear this with a lot
52	of managers – people who are functional managers – people who are really good at
53	designing a product or managing a process then they get promoted into a
54	management position where they have to deal with people – and that can really be
55	challenging because they're totally different skill sets. So I've felt that way in
56	situation where I was asked to do something I didn't know much about.”
Question 10	
	No answer given
Questions 11 and 12	
57	“These are people who seem very very unhappy – they feel extremely – they're not in
58	the right place in terms of the work they are doing. I can relate. At times when I'd
59	been working so hard and trying for so long and felt so thwarted in so many
60	different avenues – I felt betrayed by my company, I felt betrayed by my boss. And
61	the organization I was working for was in a process of downsizing – and people
62	were trying desperately to protect their turf. The competent ones had left already.
63	The ones left were afraid and didn't have anywhere else to go. That's how I felt –
64	really upset on all levels and it was so painful to get up and go to work.”

	Question 13
65	“The only thing that kept me going during that phase was I was earning a really good
66	salary. And I didn't have a choice. They talk about golden handcuffs and that's very
67	much a reality. That job I was earning four times more than any other job in my life.
68	So it was very tempting to continue in that vein. It was really difficult to leave even
69	though I was so unhappy because it was scary. It was scary to go out and look for a
70	new job – I don't enjoy looking for jobs.”
	Question 14
71	“Older business managers – the one thing it makes me think of is often people as they
72	get further in their career – I've seen it happen to my dad and step dad and I've seen
73	it happen to a lot of people in my family, men especially, there's this pressure from
74	the bottom to kick you out so you reach this position of seniority and you've got this
75	pressure from beneath to kick you out and you don't know how to deal with it. And
76	that may lead to a lot of it. It makes sense if you're earning low wages – if you're a
77	business manager with that much experience and still earning little – then you're
78	going to be unhappy. Maybe you feel you aren't being rewarded. You could say –
79	there's a chance – in South Africa – maybe the white managers have entrenched
80	positions of power, the black managers are being given positions of power by virtue of
81	affirmative action policies but the Coloured and Indian managers are left out. They're
82	not included under the umbrella of affirmative action.”

Career Category: Professional Business Managers

Participant ID: BM2

	Questions 1 and 2
1	“I think that would apply to the younger ones. People who have to – on the executive, people
2	keep very close to the MD. But I think of my twenty years of powerfulness in this – it was

3	honestly a fear for your own job. There were so many waves of retrenchments and
4	downsizing – and there were different names for different waves – but there was a
5	terror. Yes – you won't be a manager unless you enjoy the big picture. You must be a
6	visionary. Its not all about money or power. I think for a lot of the women – I really
7	believed in what I was doing. I always believed that – what was good for the bank
8	was good for the country. I had this bigger vision. But there were many years of fear
9	- the thing that arose there was called car park politics. In the morning the boss will
10	touch the bonnet of your car to see if its cool to show how long you've been there.
11	So guys came in at seven o'clock and read the papers. And in meetings they'd all know what
12	was in the papers so I'd know they hadn't been working. But they're doing it now. They're
13	- its a governmental – they're letting people know that their jobs are on the line. That
14	They're about to be fired. And I know that when these consultants come in to do it -
15	In ten minutes they decided what your job is. I had three waves like that and I survived
16	them. Then I chose to go. But what happens in a big company is the good people
17	exit – they can't stand the stress. So you're left with more dead wood than before. My
18	phrase is: “when you don't know where your tissue box should go in a desk you're totally
19	unproductive”. Loyalty to companies became non-existent because of that. Before that
20	there was great loyalty to companies. But in a retrenchment – the administrative
21	clerks and middle managers would be taken out. And actually it made you less
22	productive because now you had to go lick your stamps and go to the post office
23	and do your own shit. It was ridiculous. So to answer – to be able to think of it as more
24	power – you were lucky. There aren't many. I think in the new dispensation with government
25	now...”
Question 3	
26	“Family life is one. Big one. Lack of creativity. Very much so. I saw two guys who actually
27	came and said to the big boss – do you want a yellow or green apple – it was like

28	that – it was that kind of question. And he'd go to the toilet and read the newspaper.
29	For long sessions and 10AM in the morning. Terrible. Disgusting. Up until almost now -
30	No – after the government came in I'd say six years before the government there was
31	still the old thing of retire after 35 years and then it started going. Huge retrenchments.
32	They actually believed they were there for life. It was because of the second world war
33	- our parents had nothing – you were encouraged to get something where you could
34	get a pension. And stay there. And the job hopping thing started with the new black elite
35	and is resented. But whites did it too. That old thing of work hard and you get there
36	went to cynicism and manipulation and anger. There's a phrase my MD used – what about
37	the 'woikers' (sic). - And that was 6000 people. I think people feel grateful to survive.”
Question 4	
38	“Because there's an innocence still. They believe that their mate will keep them there.
39	They've done it without proper controls. Tenders and everything. Now – what
40	do you call it when you're out to catch people? But they also deserve the catching. But
41	actually its changing now. Have you seen its changing? Its changing. Its like – what..”
Questions 5 and 6	
44	“That's because they come into the community they're seen as driving the big car
45	and going away early in the morning and coming back late at night. They're seen
46	as neglecting their families. I think the feeling at work is – people work for things
47	they don't believe in. For instance I couldn't sell Coca-Cola – even if I had a big
48	marketing job in it and there were lots of parties. I need to sell an idea. That was my
49	difference. I believed in the ideal. So I would use what I was given to further my ideal.
50	Which luckily happened to be the country's ideal at the stage. So I was very lucky.
51	And achieved a lot. And got 9 accounts of the provinces. That was a huge thing. I saw
52	around me all these people who – you know the thing is – if you have people depending
53	On you financially you have to do your job. I never thought of changing my job.

54	I didn't know where to go or how to. I'd left the SABC which was quite a scary thing to
55	do but there was such politics there I couldn't stand it. I went in there with creativity
56	and they put me in strategic planning. Those guys were just doing numbers not
57	strategy. And you need a marketing type to grow things. People seem to be happiest when
58	they have their own agenda. The closer you got to self creativity in a corporate
59	environment the happier you are. Also – another aspect that I think should be
60	considered is you'll take a creative person and put him in an administrative position
61	so he can go up and actually you deaden him. So perhaps the more people you have
62	reporting to you the less creative you feel.”
Question 7	
63	“There's no alternative. You've got two children in a private school and major medical
64	aid – its practical – pragmatic. And especially if you're over forty you aren't going to get
65	another job. The only people who move around like that are the CA's – the financial
66	directors. It's easier. Or if you've got very relevant local experience in tendering.
67	At stages in life you cannot – and you just grit your teeth and go for it – and the aim is
68	To make the limiting moments – the affirming moments more and the routine – you collect
69	your salary at the end of the day.”
Question 8 and 9	
70	“Do they need it? Do they need it? You should get it at the very least on your once a
71	year performance appraisal – and I got very good ones and I'll be endlessly grateful
72	to my manager because of that. And the way they do that – we would discuss the
73	year. What we planned at the beginning what we'd done what we should carry over -
74	and the last 5 minutes of the hour we would do the appraisal for two minutes.
75	The discussion – the human side of it – the communicative process was the affirmation
76	I needed. I tell people if you don't get scolded take it as affirmation. You must be doing it
77	right. I've seen it in all the big firms. People don't get affirmed. Someone else takes it

78	as theirs. You've got to know – let people know you're doing it.”
Question 10	
79	“Because of the structures they've built up around themselves and the financial needs.”
Questions 11 and 12	
80	“I would say that's the vast majority. Its very hard in the last 10 years of your career
81	unless you are financial director from the age of 26. They know they've got a lot
82	to give and nobody is asking for it. People will actually use the phrase he's only
83	got 5 years to go or he's only got 8 years to go or in 10 years he'll be gone. I could
84	never get over that. They use duration – there's always someone coming up and its
85	tough at the top of the pyramid and small. So people reach a hiatus in their careers
86	and stay there. He's doing ok in his job – he's fine – but its more of the same every
87	day. Same parking place same newspaper, same tea at same time. And they actually
88	have a lot to give. I believe in the power of mentorship. If it was ruling in corporations.
89	If its done informally it doesn't work. Its got to be – you will be mentored for six months
90	then you've got the option to renegotiate who mentors you but they guy at the top
91	will get more money for it. That would be an add to keep the 50 years plus happy - pay
92	them for the extra hours to mentor others.”
Question 13	
93	“The coloured – they feel neither black nor white and a lack of opportunity and I think that's
94	true. And the Indian feels superior to – I think – other people and has better qualification
95	and is not being used. This is definitely a form of racism.”

Career Category: Professional Business Managers

Participant ID: BM3

Questions 1 and 2	
1	“This hasn't been my personal experience but I can relate what I have seen in those
2	around me who seem to feel this way. It may be as a result of their personal
3	experiences or the observation of people around them – especially their family members
4	or peers. It may depend on what their role models have achieved. If people tell
5	them that this is the right path to follow – and they see other people succeeding in
6	this path then they might feel it likely that they will too. I haven't felt that way in my
7	career. For me I see it largely as a perception they may have based on what other people
8	have told them or what they imagine the case might be. Sometimes as a result of what
9	they see around them and then extrapolate that this might be how things will be for
10	them.”
Question 3	
11	“Certainly family, friends and a balanced lifestyle. To some extent one's self respect.
12	I gave up opportunity to spend time with my family, to see my kids growing up.
13	Because I moved around so much for my job I didn't have the opportunity to form
14	lasting social bonds. By the time we'd settle in one place it would be time to pack
15	up and move on to the next one. Living with this kind of transience and lack of community
16	is a sacrifice.”
Question 4	
17	“In South Africa this could be because of childhood experiences from the apartheid days
18	or because of behaviour and opinions expressed by those around them. Many South Africans
19	Were left feeling powerless but seeing images of power all around them. So there's an
20	aspiration to achieve something. The feeling that “once I get into those shoes I'll have what I
21	always wanted. I think there's also possibly a culture amongst business people that

22	says “talk big and act big”.”
Questions 5 and 6	
23	“They may feel insecure and underestimate their worth – and feel disconnected from
24	family and friends. They may also feel a sense of shame at the goals of their business -
25	say its armaments or toxic chemicals or such. Its not uncommon for people to feel a
26	disconnect between their own values and the values of their business. I haven't really felt
27	this way. I always felt my goals held some personal meaning to me.”
Question 7	
28	“Perhaps they have a lack of imagination – a lack of awareness of other options that might
29	be open to them. Perhaps they lack the courage to pursue these routes. Maybe they
30	just have no other means of earning a living so they feel trapped.”
Questions 8 and 9	
31	“Often managers can have exaggerated opinions of their own abilities but be insensitive
32	to the opinions or feelings of their charges. Not getting good feedback is a sign of a bad boss.
33	I haven't experienced feeling this way. I've always tried to give positive feedback to people
34	who have worked for me – and I've always been fortune to receive positive feedback
35	from others.”
Question 10	
36	“They may feel overconfident or unimaginative or feel they have no choice.”
Questions 11 and 12	
37	“They may show a tendency to blame others or circumstances for their own mistakes. As
38	you get older and – if you aren't feeling content in what you are doing – you need somebody
39	to blame. Its easier to blame other people than to blame yourself and take responsibility
40	for you own life. Maybe they haven't learned to do that yet.”
Question 13	
41	“They may only know one way of getting what they want. They may feel they have

42	no other choice.”
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Career Category: Professional Business Managers

Participant ID: BM4

	Questions 1 and 2
1	“Its also possible that the manager concerned is probably not customer oriented.
2	Thinking more about themselves. I always try to put the customer first – since that's the
3	reason you're there. Some managers do chase after power or control - but that's for peanuts.
4	The work goal of customer satisfaction has to be the primary focus. So I've tended to avoid
5	power struggles and just focus on the core business – serving people.”
	Question 3
6	“Its really a whole can of worms and uncertainties and maybe worries. The goal has
7	to be outside of yourself. You can concern yourself with whose doing what – who holds
8	what position and where you're going to get to but what does it all mean in the end?”
	Question 4
9	“Politically I see this expressed in the leadership of the country. I think our leaders are too
10	concerned with power and control and not with the needs of their constituents. I don't
11	know that there's enough focus on humility and serving others and perhaps more of
12	a focus on building what is imagined to be power. I think this is a real problem for
13	this country and it worries me. I don't think its particularly sustainable. People get into
14	these positions and – its a lack of experience – there's a perception of what it means
15	to be in a position of power that doesn't necessarily match the reality. I think
16	responsibility to my customers is much more important.”
	Questions 5 and 6
17	“Assuming the manager is not ashamed of his or her employment from a moral standpoint
18	then he or she must be overqualified or think they are overqualified for their post.”

	Question 7
19	“You know where you are, you know what the next step is career wise and you also know
20	whether you have the courage to go for it.”
	Question 8 and 9
21	“The Peter principle might come into play where the manager is seriously concerned – if you
22	have been in your post for some time then you have the sense to ask for help
23	when you need it from you own staff and hopefully get their support. Goals is a
24	plural. Successful management does not require that every target is achieved.
25	All normal managers have times of doubt in relation to their team goals. Its normal,
26	its healthy that the target requires effort.”
	Question 10
27	“The setting of goals requires reviews every year and the steps necessary to achieve
28	the goal can rejuvenate the person, the team, the home team and generally give the
29	effort needed for success”
	Questions 11 and 12
30	“Taking the older, experienced business managers, I’d suggest they have /many months of
31	reports and monthly meetings and figures that are routine and at times intrude into
32	the time needed to work on real goals and so are spoken of negatively. Interim goals
33	during the year are satisfying but most budget targets are always slightly out of reach
34	and seldom all achieved. Indian and Coloured business managers... are they different? I don't
35	Know... Being a manager in a company engaged in sales and service, month to month
36	performance limits ones horizons in many aspects of management. The final goal
37	is simply on-going because you change it all the time.”
	Question 13
38	“Its a bit like playing golf – the least likely game to win for professionals – there is no lack
39	of players!”

Career Category: Professional Business Managers

Participant ID: BM5

Questions 1 and 2	
1	“I think that most people have an inherent need to assert themselves in some area of life.
2	In a work environment they receive a greater and more consistent volume of motivational
3	messages so they come to focus their ambitions on their work environment. They get
4	motivational messages from their managers or their co-workers. If they get a promotion
5	then their families may benefit.
6	Yes, I felt this but fortunately I was able to balance this need with a strong and supportive
7	family life so that need didn't come to dominate my life.”
Question 3	
8	“Yes, you really sacrifice closeness in other areas of life.. closeness at home in your
9	domestic relationships, closeness with co-workers. If you're aiming for control
10	you're going to step on some heads – and that can isolate you.”
Question 4	
11	“I think this is almost inevitable, given the long period of dispossession and servitude to
12	which black folk have been subjected. They now have an urgent need to assert
13	themselves in public life, and the corporate environment is readily available.”
Questions 5 and 6	
14	“Most successful managers reach their goal by becoming workaholics, spending
15	more than eight hours a day at work together with the weekends. Even during annual
16	leave that they might be forced to take, their attention is still focused on their work.
17	When this happens every other sphere of their lives is neglected – and society doesn't
18	like that and withdraws its approval because of it. I've always made an effort to keep my
19	family playing a very important role in my life so I didn't neglect that area. Fortunately
20	– I'm grateful for that. You've got to have some value outside of just making money

21	and being at the office.”
Question 7	
22	“There's a lot of family and community pressure on business people to succeed, become
23	wealthy and then pour money back into the community – so improving general
24	conditions for others. Business managers really feel that pressure – it manifests in many
25	different ways...”
Questions 8 and 9	
	No answer given
Question 10	
	No answer given
Questions 11 and 12	
26	“Its very common to hear stories of disappointment from older colleagues who say it
27	doesn't help to work hard because corporate life is unfair and you're doomed never
28	to succeed. I've felt this way when other people were promoted past me despite the
29	fact that I felt I was better qualified or more likely to succeed.”
Question 13	
30	“I think at a certain point you've passed the point of no return. You're locked into what
31	you're doing – into this way of life. You couldn't imagine doing anything else. You've
32	invested everything – so much of yourself in your corporate ambitions.”

Career Category: Professional Business Managers

Participant ID: BM6

Questions 1 and 2	
1	“The answer is connected to my space and how I am... I think you feel recognized by
2	others – so this is an easy, structured way to get some credibility or whatever motivates
3	you. So people – normally a career like that would be motivated by power or trying to
4	get up the ladder so that's their perception of why they'd use their work goal as a way

5	of feeling better about themselves. Yes its very subtle though – you don't say “I'm going to
6	be more powerful”. I'd go home at seven at night and carry on working through supper -
7	my brain wouldn't stop thinking about what I was doing but I look back now and I see it
8	was about power. About feeling recognised by the structure that the job has created – by
9	the people in that environment. Now I realize how much I've got out of my job and I'm
10	scaling back because it wasn't really balanced. People in those environments say “I was
11	recognized so now I'm allowed to recognize myself”. The big, big guys
12	the ones that have made it to the top there are all about power. Its not about having a nice
13	working environment. They don't give. They'll step on your shoulder and your hands to
14	get where they want to go.”
Question 3	
15	“The time you spend – the balance. I don't think you have to be particularly smart to be
16	really successful but I think you can get away if you just put a lot of effort into it.
17	Now when I tell a lot of corporate people about my choice to stay at home more, I don't
18	think I've ever had anybody say to me ok nice choice but... the one older guy's eyes filled
19	with tears and said I feel like I missed my children's childhood. There's just not enough
20	time you've got to compromise on something. I've noticed at work when people
21	introduce themselves they'll say my hobbies are spending time with my family.
22	Suddenly that's your hobby? There's no time. Those guys its work, travel.”
Question 4	
23	“Its a developing aspirational society. Walking in the white man's path. There's a naivety
24	that comes from believing that – if you grow up seeing everyone having all these
25	things and then you strive to get there. But you get there and then you learn that that's
26	not – its lonely at the top. I saw a news article on pollution and how bad it is in India
27	And China and an Indian business woman being interviewed said “its our time now,
28	you've had your chance, now its ours”. So almost an anger.”

Questions 5 and 6	
29	“I think that I feel that my work now I’ve felt more like that than in my previous work because
30	then I was just unleashing my creativity and energy while now it doesn't matter anyway
31	because I have such a puny job but I’ve also moved into a group of people – I always
32	say there's two groups of people – the movers and shakers moving up the ranks and
33	then the other group who are not really ambitious to get there and quite happy to
34	let the other work two hours more on a Sunday than them. And they're just kind of
35	at work and plod along earning the money. And I’ve definitely moved into that
36	second group now. And nobody cares. Sometimes I feel if I didn't continue any of the
37	work I was doing nobody would notice. I'm not setting the world on fire.
38	I think I’ve learned something now that a lot of people learn when they retire My partner
39	has acknowledged the problem he will have with the approval thing. I think there's a very
40	distinctive thing about affirmation.”
Question 7	
41	“Money. I don't want to have to be reliant on my partner. I'll get pissed off
42	and we'll have more discussions about how we spend our money. So I just laugh
43	along with everyone else and tell them how my weekend was. And that's it.”
Questions 8 and 9	
44	“I don't think managers are very good at making people – its like parenting isn't it.
45	You give someone a challenging something – let them know they've got a really good
46	chance of doing it. But I don't think people know how to manage. So people will be
47	more instructing and not coaching or educating. It's like ok you must do this and this.
48	It doesn't make you feel very happy or competent. I had my first review in three years
49	and it just – I had a very good review and it made such a difference. After three years -
50	it started to paper over the wound that had happened. When I was made a manager
51	I wasn't given any course on how to be a manager. If you're not a courageous or

52	caring person who wants to give that to somebody...”
	Question 10
	No answer given
	Questions 11 and 12
53	“Maybe there's a cynicism that comes in there. It didn't give you what you thought it
54	would give you. Just more of the same – and that's depressing. I'm very happy to
55	have a variety of things to do in the week. Its never continuous because it could be
56	very boring otherwise. Maybe they weren't validated. They didn't feel it had
57	been worth it.”
	Question 13
	No answer given

Career Category: Professional Business Managers

Participant ID: BM7

	Questions 1 and 2
1	“For me this is about being recognized by my organization. If I do well, then people
2	will respect me, I'll become indispensable and hopefully I'll have greater opportunity
3	to do more of what I want. Its really a lot about power. How you work within the
4	system to ensure that you have some position that makes you shine, makes you seem
5	indispensable. I don't know that its always the case that this actually becomes real.
6	I speak to colleagues who feel resigned to not really caring too much about what they
7	do. It depends on personality type. Some people are all about gaining power in the
8	corporate hierarchy. Some people are just there to collect a paycheck...
9	I've felt this way – and tried really hard to please others to get what I wanted -
10	but I think I'm at a stage in my career where I feel differently – I'm wanting to do things that
11	are more meaningful to me – less just serving a machine. I think I realized that no matter
12	how much I give and how much I do – there's always just the pressure of people above

13	you wanting to keep their place and people below you wanting to take yours. So at best
14	you end up feared or resented.”
Question 3	
15	“Its everything that goes with a personal life. Its living in an environment where you feel
16	frustrated, at odds with people around you, lacking in the creative power to do the
17	thing you really want to do. In the end it feels like working against your environment
18	and the people in it rather than collaborating with them. I certainly have paid in my health -
19	being under stress and at times in an unhappy environment made me gain weight and
20	literally made me ill.”
Question 4	
21	“I think when you're starting out in something you have this vision of what its going to
22	be like. I had a very unrealistic vision of what it meant to be a manager of a business.
23	I saw it through the eyes of – I suppose films I'd seen. To me it was all about power and
24	wealth and the fun that goes with that. The more I've experienced of corporations - and
25	also working at the highest level with people who were really powerful in their companies
26	the more I've realized that my old vision of what it meant is really – really just an illusion.
27	I think of it like the roaring 20's in the US before the great depression. People were drunk
28	on this sense of everything just going up and up. I think that's something that's happening in
29	Certain areas in South Africa today.”
Questions 5 and 6	
30	“For me this has depended a lot on the relationship I've had with my co-workers and
31	the authority structures within the company. When I've had good relationships with
32	people – and I've felt fairly treated, then I tend to take pleasure in my work. When I
33	have had a good manager who's recognized my skills then tasked me in areas where I'm
34	well equipped to succeed and left me to do things the way I needed to – then given
35	me good feedback afterwards. Then I've been very satisfied. I think a lot of it is about

36	recognition. Another time I had a boss who treated me unfairly – didn't seem to care -
37	and another boss who would steal the good ideas I had and manipulate situations to my
38	disadvantage So you stop caring. There's this feeling of resignation – like what's point
39	so I stop putting myself into my work. Then 90% of the work space becomes
40	about politics. So I think its about the kind of manager you have.”
Question 7	
41	“Once you're in a job its really hard to move. You get comfortable with the people,
42	with the routine. Changing all of that means a lot of uncertainty. Not knowing where you
43	will work, whether things will be better somewhere else. Whether if you just keep going
44	things will get better. I agree salary is a big factor. You build up some credibility in
45	your organization and people are somewhat indebted to you – so you know you have
46	a place there. Up and leaving means facing the unknown. Getting cast out of your tribe.
47	I've done it – and it was tough. I think you become where you work.”
Questions 8 and 9	
48	“This is definitely about managers. I had a manager at “x” that was so affirming.
49	He made you feel like anything was possible when you were around him. He made you
50	feel like you could do – and would do anything. I was willing to work so hard for that
51	guy because – his attitude towards me and my work made me deliver my best. He
52	wasn't negative or critical or threatened. I think managers are often too threatened
53	to give people good feedback. Part of the system is about keeping others down -
54	not lifting them up.
55	I had a manager who was very bad with people. Her whole focus was on controlling things
56	and coming up with grand designs – but she was useless at understanding how to
57	make people feel cared for, competent. The whole team didn't like her – and she responded
58	by being more controlling and more authoritative.”
Question 10	

	No answer given
	Question 11 and 12
59	“I've seen managers at the ends of their careers – and there's often a sense of disappointment
60	in them, Usually what happens is they get written off by their co-workers – they get
61	taken out of “the game” and are marginalised. At the end they get a half hearted farewell
62	into retirement – but there's often not this sense of community. There's a lot of
63	turnover of staff in companies and new people don't feel any sense of loyalty to the
64	old. So they kind of get tossed out.
65	I'm not at that stage of my career yet – but from seeing relatives and friends get to that
66	stage – I think you work and work and work and then when you get to the top there's
67	supposed to be some kind of massive reward waiting there – but instead that doesn't
68	happen. Then people start questioning how they spent their time. How they didn't
69	spend enough time with their kids growing up. Its sad really and I think there should
70	be much more of a sense of community among people. It probably also comes down to a
71	more mercenary type relationship between workers and companies. In the past people
72	felt more pride in the work they did and in the work their companies did. These days
73	people often feel resigned – they don't feel proud of their companies or their values.”
	Question 13
74	“By that stage you just keep doing what you've always done. Some people try to make a
75	Change – but find that their options are limited and its best to just stick with what they
76	know and wait it out to the end.”