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CHAPTER 1: INTRODUCTION AND OVERVIEW

1.1. INTRODUCTION

This research is about constructing an organisational climate model that can be used as a guide to the detection of management fraud. This chapter commences by providing the background to and motivation for the research that serves to illustrate the impact of management fraud on society and organisations. Once the importance of the research and the need for alternative detection models have been explored, the focus of this chapter then shifts to clarify the research problem and aims. To accomplish the specific aims of the study, the researcher's assumptions and beliefs are discussed by examining the key scientific beliefs and building blocks maintained in the study. These beliefs and building blocks anchor the study and lay the foundation of the research design and approach. The level of analysis is highlighted and the steps taken to ensure the quality of the research are explored, while the final section provides an outline of the planned chapters of the intended study.

1.2. BACKGROUND TO AND MOTIVATION FOR THE RESEARCH

Fraudulent behaviour by management has become a global problem that cuts across cultural and ideological divides (Zahra, Priem & Rasheed, 2009). According to Daboub, Rasheed, Priem and Gray (1995) and Pathak and Wells (2008), there is growing realisation that management fraud is more widespread than previously believed, with the amount of management fraud scandals since the turn of the millennium being well known: AOL, Bristol-Myers Squibb, Computer Associates, Enron, Sunbeam, Tyco, WorldCom and Xerox (Ball, 2009; De Cremer, Tenbrunsel & van Dijke, 2010; Schminke, Arnaud & Kuenzi, 2007).

Desjardin and McCall (1996) emphasise that work is central to any community or society and the result of the above-mentioned scandals is therefore both negative and destructive for any organisation, community and society. And what is evident from the international scandals mentioned above is the significant damage caused, as these scandals include a decline in the worldwide reputation of a number of organisations, including in the generally accepted accounting principles (GAAP), auditors, and the demise of a once proud accounting firm and a large body of largely unhelpful literature (Greenberg, 2001).

In a survey conducted in 1993 by the US KPMG branch, 75% of the United States largest companies acknowledged that they had experienced fraud during the previous year, with fraud costing American organisations approximately 7% of their gross revenue every year, according to the Association of Certified Fraud Examiners (Goldmann, 2010). A recent survey conducted by KPMG in 2008, as reported by Kaptein, (2011) involving 5065 US managers and employees, indicated that 74% observed unethical behaviour in their organisations in the preceding 12 months. With a quarter of the respondents admitting to losses in excess of US$1 million, two-thirds reported actual or potential losses of more than US$100,000 (Pomeranz, 1995), Robinson and Bennet, as cited in Appelbaum and Shapiro (2006), stating that up to 75% of employees had engaged in deviant behaviour, through theft, various types of fraud, vandalism, sabotage and absenteeism.

Although only international organisations are listed above, South African organisations are not immune to unethical behaviour as all organisations are breeding grounds for fraudulent activities that develop slowly over several years, with certain managers who are entrusted with protecting and increasing shareholder's wealth, devising highly structured schemes to defraud people who have invested in their companies (Marks, 2009; Zahra, Priem & Rasheed, 2007; Zahra et al., 2009). In a South African context,

Dittenhofer (1995) states that fraud and embezzlement are among the largest non-recorded expenses for organisations, governments and institutions in South Africa, while corruption in the public sector represents approximately 5% of South Africa's gross domestic product, with corruption totalling R150bn per year (Gloeck & De Jager, 2005). The following table provides an indication of the amount of money being lost due to fraud committed by government officials per Province in South Africa during the 2009/2010 financial year.

Table 1.1. The cost of government official's fraud (Volksblad, 2012, http://www.volksblad.com)

Province	Costs of fraud committed by government officials	Amount returned	Amount which does not cost state anything	Outstanding amount
Eastern Cape	R 35.03 million	R 493 112	R34.36 million	R 177 129
Free State	R 973 225	R 4163	R0	R 969 062
Gauteng	R2.71 million	R68 510	R1.82 million	R825 534
KwaZulu-Natal	R17.64 million	R 879 126	R0	R16.76 million
Limpopo	R1.67 million	R 84 311	R9450	R1.57 million
Mpumalanga	R15.99 million	R 3.14 million	R0	R12.85 million
North West	R 293 871	R 28 167	R0	R 265 704
Northern-Cape	R699 194	R 121 522	R 3000	R658 138
Western-Cape	R6.17 million	R121 522	R 0	R 6.05 million
Total	**R 81.17 million**	**R4.86 million**	**R 36.19 million**	**R 40.13 million**
				Plus
National Outstanding Amount			**R 262 million** **= approximately R 300 million**	

October (2012) reports that government officials stole R300 million from taxpayers in the 2009/2010 financial year, with 1135 government officials being investigated for financial misconduct and 998 being charged during the 2009/2010 financial year. What is further reported in October (2012) was that only 214 of these officials were dismissed and only 2 received prison sentences. One of the most controversial scandals, according to Coetzee (2010), which is still being investigated, is the so called arms deal, a public sector procurements transaction. In 1995, the government of South Africa purchased US$4.6 billion worth of arms. Unfortunately many allegations of fraudulent practices have been linked to this deal, including bribery by and via various high-level political figures, with Lubbe, as cited in Coetzee (2010, p.18), arguing that the Government of South Africa is at a crossroads when it comes to fraud and that many politicians have little respect for legislation. This despite the fact that in 1999 the then Deputy President of South Africa, Mr. Mbeki, described the struggle against corruption as a national priority, thereby giving irrevocable urgency to all activities related to the prevention of corruption (Gloeck & De Jager, 2005). Mr. Mbeki repeated this stand in 2005 by stating "Fraud and corruption ... is inimical to development. It constrains our ability to fight poverty, negatively affects economic development, damages social values and undermines democracy and good governance" (Gloek & De Jager, 2005, p.49). However, despite the urgent appeal of Mr. Mbeki to address the high incidence of corruption, corporate crime and corruption is almost institutionalised in South Africa, with South Africa's young democracy experiencing high levels of crime, including fraud and corruption (Pillay, Dorasamy & Vranic, 2012).

While it is acknowledged that human greed has always been part of the business environment, what has changed is the public's acceptance of unethical behaviour and therefore, given the high incidence and cost of fraud internationally and locally, it is astonishing that fraud per se has not attracted more research efforts as stakeholders, including shareholders, governments and non-governmental organisations are placing increasing pressure on organisations to manage unethical behaviour more effectively (Gloeck & Jager, 2005; Greenberg, 2010; Kaptein, 2008). Enron, WorldCom and Arthur

Andersen, amongst others, have underscored the fact that the current modes governing companies are not sufficient to protect investors and public interests as it is easy it is for otherwise honest people to be swept along in a climate of corruption (Brooks & Dunn, 2010; Litzky, Eddleston & Kidder, 2006; Sweeny, 2003). A number of previous studies including inter alia, the work of Deshpande, Fritzsche and Wimbush; Jones and James; Reichers and Schneider, and Shepard, have proposed that a relationship exists between the climate of an organisation and the ethical behaviour of employees (Cohen, 1995; Litzky et al., 2006; Peterson, 2002). Based on these studies there is an increasing acceptance of the notion that the organisational environment has a strong influence on unethical behaviour within the organisational environment (Mayer, Kuenzi & Greenbaum, 2009).

Therefore as a discipline organisational psychology provides an excellent vantage point for understanding management fraud, as it focuses attention on the familiar phenomenon of a sick organisation, which can assist one in understanding specific cases of organisational dysfunction as well as general organisational dynamics (Kreitner & Kinicki, 1995). Ramamoorti and Olsen (2007) support the above view by stating that fraud detection and prevention should focus on how to deal with the underlying behavioural dynamics – the psychology of fraud perpetrators, as well as the psychology of those responsible for corporate governance.

Climate relates to the recognition of the organisation as a system and the extent to which membership is a psychologically rewarding experience. It can be viewed as a state of mutual trust and understanding among employees of the organisation and is characterised by the nature of the employee-organisation relationship and the superior-subordinate relationship (Mullins, 1989). Organisational climate can be viewed as the "personality" of the organisation, that is, organisational climate is to the organisation as personality is to the individual (Hoy, Tarter, Kottkamp, 1991, p.4). The majority of research on organisational climate has focussed on a particular aspect of the

psychological field measuring, for example, climate for service, climate for safety, climate for innovation and ethical climate. This research project will follow the same rationale and focus specifically on identifying a climate that is conducive to the occurrence of management fraud. Therefore, an alternative model needs to be explored for detecting and preventing management fraud in particular. Hence this study hopes to construct an organisational climate model that is able to identify "red flags" indicating management fraud.

1.3. THE RESEARCH PROBLEM

It is clear that management fraud is a global and national concern, and has become so sophisticated that auditors seldom discover it, while others argue that the laws and regulations enacted have become so sophisticated and complicated that they actually contribute to the growing incidence of management fraud (Berenson, 2003; Hansen, McDonald, Messier & Bell, 1996). A number of recent scandals as reported above have resulted in loss of investor confidence in the reliability of reported earnings, with the current existing modes governing companies not being sufficient to protect investors and public interests (Brooks & Dunn, 2010).

According to Fraedrich et al. (2011) management fraud does more damage in monetary and emotional loss in one year than all street crimes over several years. Management fraud poses significant economic costs to society with the 1997 issue of the magazine Security (Vol. 34, No. 7, 32-33), as cited in Green and Calderon (1998), reporting that management fraud by senior managers and executives is 16 times more costly than basic employee fraud. Green and Calderon (1998) state that the median loss for basic employee fraud is US$60,000, while the median loss in a case that involves management and senior officers exceeds US$1,000,000. This statement is supported by Lowe and Charron (2008) who state that fraudulent financial statements comprise the smallest percentage of reported fraud cases (7.9%), but they represent the highest

median losses per case (US$1,000,000) and are more likely to be publicized. Brewe (2008) indicates a higher median loss of US$2 million for financial statement fraud as reported by the Certified Fraud Examiners.

Management fraud not only impacts society and the overall stability of global economies (Zhou & Kapoor, 2011), but has an influence on the accounting profession, with a number of authors stating that management fraud is one of the most serious problems faced by the accounting profession and is one the most difficult and demanding problems to solve (Deshmukh & Lakshminarayana, 1998; Fanning et al*., 1995;* Green & Calderon, 1998). Palmrose, as cited in Hansen et al. (1996), states that the prediction of management fraud is important as the presence of management fraud often leads to damaging lawsuits against public accounting firms. The accounting profession faced approximately $30 billion in damage claims in the early 1990s, as a result of litigation associated with management fraud (Arthur Andersen as cited in Green & Calderon, 1998). Among the big six accounting firms, the direct costs of defending those lawsuits totalled approximately $477 million (Green & Calderon, 1998). Management fraud is a leading cause of litigation facing the auditing profession (Palmrose; St Pierre & Anderson as cited in Fanning, Cogger & Srivastava, 1995). According to O'Malley; Elgin and Fuerman, as cited in Famming et al*. (1995) and* Crutchley et al*. (2007),* the severity and the number of the litigation awards has resulted in changes in the operation of the accounting profession.

What is clear from the literature is that the most cost-effective way to fight fraud is to prevent it from happening, as organisations victimized by fraud rarely recover their losses (Kranacher, 2007; Murdock, 2008). And while it is evident from the previous section that prior research on management fraud detection based the likelihood of fraud on numbers and ratios, this method is usually too late to be effective since it indicates fraud long after ruinous financial results are irreversible (Churyk, Lee & Clinton, 2008). To be able to detect management fraud sooner, would reduce the impact of

management fraud considerably as most fraudulent activities commence slowly but expand over time (Kranacher, 2007).

Kreitner and Kinicki (1995) believe that organisational psychology as a discipline provides an excellent vantage point for the early detection of management fraud, as previous research seems to indicate that these crimes can be perpetrated by almost any employee or person as there does not seem to be a specific class of people, nor meaningful profile of the individuals who commit these crimes (Dittenhofer, 1995). Dittenhofer (1995) further implies that there have been numerous studies which have not been very helpful relating to the demographics, economic status, education, marital status and other measurable characteristics of those who have been caught and usually prosecuted. Despite the public outrage and cynicism, systematic empirical research in this area has been limited with the simple questions not yet being answered (Zahra et al., 2005): -

- What motivates certain successful senior managers to engage in fraudulent behaviour?
- How do managers succeed in involving others in their fraudulent schemes?
- What factors in an organisation's culture contribute to a manager's inclination to commit fraud?

These clear-cut questions have not been answered and deserve study to better understand organisational deviance and its ill effects on employees, organisations, communities and society at large. What is clear is that the once familiar picture of ethics as an individual construct, unchanging, and not influenced by organisational influences, has not faced scrutiny in recent years (Paine, 1994). Paine (1994) states that ethics is as much a personal issue as an organisational issue and rarely do the personal character flaws of an individual fully explain corporate misconduct. Victor and Cullen (1988) and Worrell, Stead, Stead and Spalding (1985), unequivocally agree that organisations are social actors responsible for the ethical or unethical behaviours of

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their employees and ethics is one of the most important and confounding issues facing organisations today.

Albrecht et al. (2009); Cremer, Tenbrunsel and van Dijke (2010); Dorminey et al. (2012); Murphy et al. (2011) and Ramamoorti (2008), argue that more psychology and behavioural sciences need to be brought into the fight against fraud, and therefore this study contributes to the existing fraud literature by integrating Industrial/Organisational psychology literature, specifically the concept organisational climate, with existing fraud literature. This study therefore not only augments fraud literature, but also contributes to I/O psychology by studying individual deviance from an organisational perspective.

The following questions serve as point of departure for this research:

- What is meant by management fraud?
- What is meant by organisational climate?
- How can organisational climate be used to detect management fraud?
- What conclusions can be drawn and recommendations made based on this research?

1.4. AIMS

The general aim is given first, after which specific aims are provided.

1.4.1. General Aim

The aim of this study is to propose a model that serves as a guide to detect management fraud based on the organisational climate of an organisation. The aim is hence to identify "red flags" within an organisation's climate.

1.4.2. Specific Aims

- to conceptualise management fraud through an in-depth literature review;
- to conceptualise organisational climate through an in-depth literature review, focussing on ethical climates;
- from the literature review, to construct a theoretical model that can be used to predict the potential risk of management fraud through the climate of an organisation;
- to test the model for face validity;
- to formulate conclusions and recommendations from the research which will make a contribution to the prediction of management fraud.

1.5. THE PARADIGM PERSPECTIVE

"It may be possible to do good quantitative research without knowing much about epistemology of the philosophy of (social) science, but good qualitative research requires an informed awareness of philosophical perspectives" - Ponterotto (2010, p. 581).

Paradigms are the systems of assumptions and beliefs that are shared by the members of a scientific community and guide the researcher in his/her research (Bailen & Grafstein, 2010). The research paradigm anchors the study and serves as a roadmap guiding the researcher in all phases of the research, and in order to conduct quality research it is necessary from the outset for researchers to unpack their scientific beliefs as best as possible, as the way in which one constructs one's social views will eventually influence one's presentation of facts and therefore it is vital to view the construction of one's social views at the initiation stage of one's study (Flick, 2011; Guba & Lincoln, 1994; Beyleveld, as argued in Oosthuizen, 2009; Ponterotto, 2010; Schurink & Schurink, 2012).

The next section will provide clarity on the disciplinary perspective adopted in this study and will then proceed by examining the paradigm perspective followed in this study, by exploring the key scientific beliefs of the researcher.

1.5.1. Disciplinary Perspective

This study examines management fraud from an industrial and organisational (I-O) psychology perspective. Industrial and organisational psychology utilises a considerable amount of theory and methodology of psychology and its subfields to study human

behaviour and related processes in the workplace, it has adapted and developed its own identity, with unique theories, research areas and application areas (Bergh, 2011). Bergh (2011, p.4) defines I/O psychology as the "scientific study of people in their workplace" and I/O psychology can be viewed as scientific as it has, utilises, develops and teaches foundational knowledge; its foundational knowledge is supported by effective research and it uses many types of tested practical applications and methods to achieve the best fit between the employee and the workplace and to solve work related problems (Bergh & Geldenhuys, 2013, p.6).

1.5.2. Key Scientific Beliefs

Schurink and Schurink (2012) are of the opinion that there are basically three distinctive combinations of ontological and epistemological approaches to qualitative research, namely: Objectivism, Interpretivism and Constructionism. These approaches are now briefly examined.

Objectivism: The belief within this approach is that there is an external reality that can be studied objectively. Objectivity refers to the ability to know things as they really are. This approach is predominant in the quantitative paradigm, as the method plays a vital role in objectively enabling the researcher to understand the meaning that individuals give to everyday life experiences. Hence the methodology needs to place checks on researcher subjectivity and restrain personal judgement and emotions (Schurink & Schurink, 2012).

Interpretivism: Interpretivists believe that a different methodological approach is necessary for the social sciences as the subject matter is fundamentally different from the natural sciences. Advocates of this approach emphasise an interpretative understanding and explanation that enables the social researcher to appreciate the

subjective meaning of social action (Symon & Cassell, 2012). The assumption is that reality should be interpreted through the meaning that research participants give to their life world (Schurink & Schurink, 2012). This approach provides a deep insight into "the complex world of lived experiences from the point of view of those who live it" (Schwandt as cited in Andrade, 2009, p. 43)

Constructionism: Constructionists believe that reality can be socially and personally constructed, as there is no truth "out there" only narrative reality that changes continuously. Hence the research participant should remain involved in the process as reality is viewed as the result of constructive processes (Schurink & Schurink, 2012).

Utilising the approach as proposed by Henning et al. (2004) to reflect on my purpose for this study to determine my theoretical framework and based on the descriptions as provided by Schurink and Schurink (2012), I discovered that my research perspective is situated in the *interpretivist research paradigm*. An interpretative framework will be used in this study and may be viewed from a social science theoretical lens that denotes a post-positivism approach (Creswell, 2013). Creswell (2013) implies that researchers within this approach view inquiry as a series of logically related steps and believe in multiple perspectives from participants rather than a single reality. Researchers within the post-positivism approach prefer rigorous methods of qualitative data collection and analysis, preferring traditional qualitative methods such as interviews and case studies in as quantifiable a manner as possible (Ponterotto, 2010). Researchers working within this approach attempt to be as dualistic and objective as possible (Ponterotto, 2010).

This study lies within the interpretivist paradigm as the researcher believes that there are factors within an organisation's climate that will play a role in an individual's decision to commit management fraud. The researcher's intention is to attempt to understand the phenomenon through the subjective interpretation of those who experience it. Holton

and Lowe (2012) are of the opinion that the goal of theory building in the interpretive paradigm is to generate descriptions, insights and explanations of events so that the system of interpretation and meaning and the structuring and organising processes are revealed. Therefore as Henning et al. (2004) states, it is anticipated that knowledge in this study is not only constructed by the observable phenomena (management fraud), but also by descriptions of people's intentions, viewpoints, morals and reasons, meaning making and self-understanding which is implied by the organisational climate. Organisational climate is formed as a result of individual employees' perceptions. These features will be dealt with in Chapter 5 in detail, as a model. The researcher's decision to situate the study within the interpretivist research paradigm is further based on the belief that the current theory on organisational climate can be applied in an adapted fashion to detect the prevalence of management fraud in organisations, and that the purpose of this study is to gain a deep understanding of the effect of organisational climate on management fraud. Working within this framework further allows the researcher to develop insights not possible through other forms of analysis (Shah & Corley, 2006). Lastly, the researcher wanted to present the theory (and evidence), and not necessarily study how widely it would be applicable.

1.6. SCIENTIFIC BUILDING BLOCKS USED IN STUDY

The following section will describe how theories and models were utilised by the researcher to realise the study's aim and objectives.

1.6.1. Theory Building

Since the publication of The Discovery of Grounded Theory in 1967 by Glaser and Strauss, qualitative researchers have discussed whether the purpose of theoretical studies should be to develop or verify social theory, or both (Taylor & Bogdan, 1998). Furthermore, although Glaser and Strauss believed that qualitative and other social

scientists should develop or generate social theory, as qualitative methods produce theories that more accurately describe real-world issues and processes than do quantitative data, what is evident from the literature is that qualitative researchers have been debating what theory entails for some time (Bereiter, 2012; Corley & Gioia, 2011; Fine & Elsbach, 1999; Gay & Weaver, 2011; Lynham, 2000, Oosthuizen, 2009; Shoemaker, Tankard & Lasorsa, 2004; Sutton & Staw, 1995; Taylor & Bogdan, 1998; Thomas, 2010). An extreme opinion as provided in: *Strong programme in the sociology of knowledge,* denies that any theory describes an objective reality. According to this approach, theory is just a matter of socially reached consensus among the scientific community as to what to believe (Gioia & Pitre, 1990). But despite the above opinion, Torraco (2004) believes that advances in theory building research methods and theory have occurred in the disciplines of management, sociology and other fields, and that the "lack of consensus on exactly what theory is may explain why it is so difficult to develop strong theory in behavioural sciences" (Sutton & Staw, 1995, p.372).

Given the lack of consensus on what theory is, Silverman (2011, p.453) utilises the analogy of a kaleidoscope or lens through which one sees the world to explain the role of theory: "When you turn the tube, you look down the lens of the kaleidoscope and the shapes and colours, visible at the bottom, change. As the tube is turned, different lenses come into play and the combination of colour and shape shift from one pattern to another."

This analogy by Silverman (2011) makes it clear that theory should therefore provide one with different angles, viewpoints and approaches in understanding and explaining reality. 6 and Bellamy (2012) emphasise the different views of theories by viewing theories as an extension or refinement of our own previously developed theory or of others. The various definitions of theory, allow certain scholars to define theory in terms of the relationship between independent and dependent variables, while other scholars view theory in terms of narratives and accounts (Colquitt & Zapata-Phelan, 2007). The

first approach evaluates a theory primarily by its ability to explain variance in a criterion of interest, while the second definitional standpoint evaluates theory by the richness of its account, the degree to which it provides a close fit to empirical data and the degree to which it provides novel insights. In addition, researchers have a choice in terms of the theory they wish to construct as researchers may build universal or causal theories that will fit all situations, or they can build context-based theories that will apply to one situation only (Gilgun as cited in Oosthuizen, 2009). But despite the different views, definitions and type of theories, the primary goal of theory building, according to Bereiter (2012), is to produce improved explanations, with theory-building experts agreeing that there are three primary criteria that theories must meet: 1) The identification of constructs; 2) the relationship between these constructs must be specified; and 3) these relationships must be falsifiable (Doty & Glick, 1994), Spiggle (1994) contending that knowledge development is dependent on theory building.

Given the goal and criteria for theory building, the intended outcome of theory building according to Dubin (1978); Lynham (2000); Sigert, McPherson and Dean (2005), is firstly outcome knowledge in the form of explanation and predictive knowledge, and secondly in the form of increased understanding of how something works. Rowlands (2005) views theory building as a selection of concepts and relations among them that are grouped in such a manner as to allow individuals to see their structure.

What is evident is that process of theory development is informed and influenced by the researcher's definition of theory. Therefore, to avoid the common tendency to attempt to force-fit functionalist theory-building techniques as a universal approach, the researcher thought it prudent to restate the research paradigm followed in this study. The understanding of the phenomenon in this study is based on the interpretive paradigm perspective as the goal of theory building within this paradigm is to generate descriptions, insights and explanations of events in order that the system of interpretations and meaning, and organising and structuring is revealed (Gioia & Pitre,

1990; Lynham, 2000). A view adopted in this study is that theories are useful ways of predicting what will happen under given circumstances, but without making any claim as to whether the theories describe an actual reality.

Within this context the broad theory building definition as offered by Gioia and Pitre (1990, p.587) is presented: "Any coherent description or explanation of observed or experienced phenomena".

Lynham (2000, p.161) expands on the above definition by viewing theory building as the: "process or recurring cycle by which the coherent description, explanations and representations of observed or experienced phenomena are generated, verified and refined".

What is evident from the definitions and literature, is that researchers have a choice in terms of the theory they wish to construct, as researchers may build universal or causal theories that will fit all situations or build context-based theories that will apply to one situation only. Taking the above into account, the researcher thought it prudent to follow the theoretical approach of McTavish and Loether (2002) who distinguish between macro-level theory and micro-level theory. Within the paradigm perspective followed and for purposes of this study, a micro-level theory was utilised as it focuses on smaller cases (e.g. those that apply to individual people as cases rather than whole societies).

Based on the above, this study supports the view of theory construction as stated by Dubin (1978, p.28) as it provides an accurate, focussed and useful description of theory building: "A theory tries to make sense of out of the observable world by ordering the relationships among elements that constitute the theorist's focus of attention"

The essence of theory is to provide a map or model as to why the world is the way it is, hence it is a simplification of the world, but a simplification aimed at clarifying and explaining some aspect of how it works (Maxwell, 2013).

1.6.2. Model Development

Beyleveld (2008, p.22) defines a model (based on Bailey's description) as: "a copy/replica or analogy that differs from the real thing in some way".

For example, a model is words or a figure that portrays the main characteristics of the phenomenon under study. Silverman (2001, p.3) defines a model as: "an overall framework for how we look at reality. In short, they tell us what reality is like."

Mouton (2002) is of the opinion that models are not much different from theories. The only difference lies in the fact that models are used to discover or reveal while theories are used to explain. Or as Shoemaker et al. (2004, p.112) states: "Though a model is not a theory, a model can be used to represent a theory" as models "provide a systematic representation of phenomena by identifying patterns and regularities among variables" (Burden, 2005, p.33). Horner, Bhattacharyya and O'Connor (2008) noted that modelling is complex and is more than just imitation of the truth, modeling should reflect the truth.

What is evident is that the functions of models are, 1) to organize data- they can demonstrate similarities and connections among parts not previously recognised; 2) to make predictions- by suggesting relationships we may not have thought about before, a model can lead to testable hunches; 3) To provide a helpful heuristic tool- a helpful

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pedagogical device that encourages students to find out things for themselves; 4) Lastly to help make measurements (Burden, 2005). However, one should bear in mind that the criteria of a good theory are: accuracy, scope, simplicity and fruitfulness (Sommer & Sommer, 2002).

Hence theoretical model development can be viewed as a set of components that are arranged in a specific pattern and relies on a few general constructs that subsume a mountain of particulars, and understanding the components and their arrangements will eventually lead to an understanding of the phenomenon (Miles & Huberman, 1994; Oosthuizen, 2009). This process of developing the model by identifying the constructs and arranging these constructs in a comprehensible fashion will be discussed in the next section.

1.6.2.1. Theory building methodology utilised in the study

Traditionally the process of formal theory building as proposed by philosophers of science, was intended to progress in an orderly manner from description to taxonomy and thus to testable causal hypothesis and was based on combining observations from previous literature, common sense and experience (Breakwell & Rose, 2002; Eisenhardt, 1989). Because of the number of different views and theories on theory building, Storberg-Walker (2007) recommends that a researcher must search the available literature to understand the available theory building options in order to make the most informed decision possible. In order to comply with this recommendation and in line with the research approach followed, the following procedure was followed:

1. A review was conducted to seek out a wide variety of information about theory building research.
2. Relevant literature was read and reread and implications about selecting one or more specific processes for the emerging theory was compared and contrasted.

3. Based on the understanding generated from above, I identified Dubin's seminal theory on model development (See Figure 1.1.). Robert Dubin's (1969) classic book *Theory Building: A Practical Guide to the Construction and Testing of Theoretical Models* presents an educated argument for theory building that is relevant to applied disciplines such as management, marketing and organisation theory (Ardichvili, Cardozo & Ray, 2003; Dubin, 1969, Dubin, 1978; Lynham, 2002; Swanson, 2007; Upton & Egan, 2010).
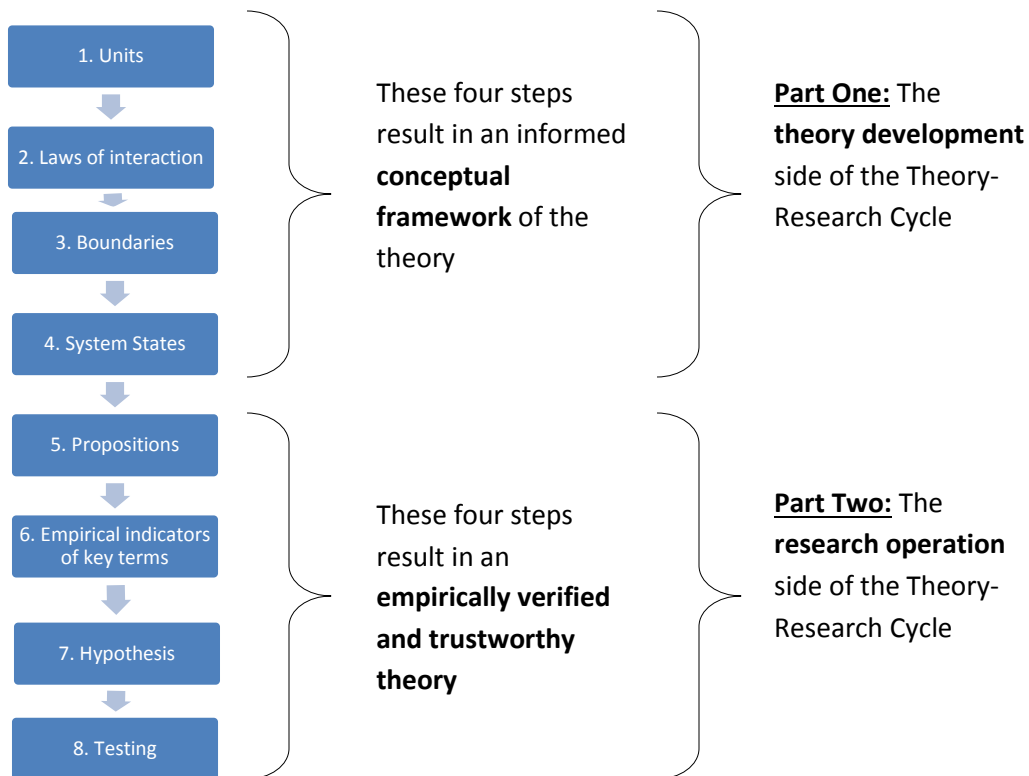
Figure 1.1. Dubin's theory building model (Lynham, 2002, p.243)

As viewed in figure 1.1., Dubin's theory building can be divided into two core components: theory development and research operationalisation (Swanson, 2007). The first four phases can be viewed as structural components and complete the theory development part, while the last four serve as the process of empirical validation (Ardichvili et al., 2003; Lynham, 2002). The eight phases of Dubin's theory building include (Ardichvili et al., 2003, p.107):

1) Units (i.e. concepts) of the theory: According to Ardichvili et al. (2003); Jaccard and Jacoby (2010); Shoemaker et al. (2004) and Storberg-Walker (2007), concepts are arguably the most substantive and important building blocks from which theory is constructed as it is these concepts that ensure a basic understanding of the world. Concepts allow the researcher to rise above the messy detail so as to understand the core of what the phenomena are about (Carlile & Christensen, 2009).

Jaccard and Jacoby (2010, pp.11-12) view concepts as the building blocks for all thinking and provide the following information concerning concepts:

- *Concepts are generalised abstraction:* A concept can be viewed as a general idea that can be applied across a number of specific instances.
- *An important feature of concepts is that they consist of a universe of possibilities;*
- *Concepts are hypothetical:* Concepts are not reality, just ideas regarding reality.
- *Concepts are learned and socially shared:* In order for communication to occur, the set of concepts possessed by one person generally needs to be similar to the sets possessed by others.
- *Concepts are reality orientated or functional:* Although not physical reality themselves, most concepts are presumably tied to the external world and are used as a guide for interpreting and reacting to this world.
- *Lastly, concepts are selective constructions:* The world we experience can be conceptualised in almost countless ways. Hence the way in which concepts are applied to describe reality, depend upon the needs and objectives of the individual doing the conceptualisation.

Dubin's theory concurs with the above views by stating that the first phase in theory development requires identification of the units (concepts) of the theory as these units represent the variables whose interactions constitute the subject matter or phenomenon (Lynham, 2002).

2) Laws of interaction (among the concepts): Concepts used in isolation provide a limited degree of understanding, therefore a vital step in developing a model that is based in science is to clarify the interactions among the units employed in it (Dubin, 1978; Jaccard & Jacoby, 2010). Therefore once the units have been identified, the next step is to specify how the units interact and relate to one another or, stated differently, how changes in one or more units of the theory influence the remaining units (Ardichvili et al., 2003; Doty & Glick, 1994; Dubin, 1978; Lynham, 2002). According to Dubin (1978), the law of interaction among the concepts is employed to focus the attention on the relationships being analysed, therefore this step in the process is accomplished by stipulating the laws of the relationship that pertain to the units of theory and moves the researcher to a deeper understanding of the reality through constructing a basic conceptual system (Jaccard & Jacoby, 2010; Lynham, 2002).

3) Boundaries of the theory (the boundaries within which the theory is expected to apply): The third step in the process as proposed by Dubin enables the researcher to determine the limited domain of the world in which the theory is expected to hold true (Dubin, 1978; Lynham, 2002).

4) Systems states of the theory (conditions under which the theory is operative): This serves as the final step in the theory development side of the cycle and indicates the complexity of the real world that the theory is presumed to represent and the different conditions under which the theory operates (Lynham, 2002).

To ensure the informed nature of the theoretical framework the researcher, according to Lynham (2002), is forced to rely on thorough and scholarly exploration of relevant and current literature and research, as well as observation of the phenomena in the real

world. Once the theoretical framework has been developed the researcher can progress to the second part of the theory-research cycle.

5) Propositions of the theory (logical deductions about the theory in operation): This step requires the researcher to derive truth statements or logical deductions about the theory in action. These propositions are grounded in the explanatory and predictive power embedded in the theoretical framework of the theory constructed during the previous phase (Dubin, 1978; Lynham, 2002).

It is at this point that the researcher, according to Lynham (2002), often discontinues the process as the theory is considered developed and ready for further testing.

6) Empirical indicators (empirical measures used to make the propositions testable): The next step is to identify the empirical indicators of the theory (Dubin, 1978; Lynham, 2002).

7) Hypotheses (statements about the predicted values and relationships among variables): This requires the researcher to construct hypotheses and involves logically substituting the empirical indicators in the proposition statements with testable, confirmable hypotheses (Dubin, 1978; Lynham, 2002).

8) Research (the empirical test of the predicted values and relationships): The final step in the process is to engage in the actual testing of the theory through a thoughtfully specified research plan of ongoing data gathering to enable adequate verification and/or refinement of the theory (Lynham, 2002).

1.7. MY RESEARCH APPROACH

1.7.1. Type of Research

The research strategy proposed will be based on nomothetic-deductive reasoning of the literature to discover general patterns of laws of human behaviour (Mouton & Marais, 1992; Babbie, Mouton, Vorster & Prozesky, 2010) and inductive hypothesising in empirical research (Strauss & Corbin, 1990).

What is evident from the literature is that a distinction can be made between starting research with a strong theoretical basis and then conducting the research, or starting by examining the data and then developing and using theory to interpret findings: deduction and induction (Alvesson & Karreman, 2011). The theory-then-research nomothetic approach which is followed by the majority of researchers commences with theory, deduces some implications of the theory for testing and then examines factual data to see whether the deductions are proven false (Alvesson & Karreman, 2011; Jaccard & Jacoby, 2010; Nielsen, 2009). The outcome has implications for the theory itself, as it tests theoretical propositions (McTavish & Loether, 2002). Theory generation within the interpretivist paradigm is iterative, recurring and typically nonlinear, and movement between the various research stages is critical to the development of new ideas and insights (Alvesson & Karreman, 2011; Holton & Lowe, 2010). Working within this paradigm required the design of the study to be nonlinear and therefore this study is based on what Berg (2007) refers to as *the Spiralling research approach*. The steps in this approach are viewed as spiralling and not linear progression as proposed by the theory-before-research or research-before-theory orientations (Berg, 2007).

Figure 1.2. provides a schematic representation of the approach followed in this study.
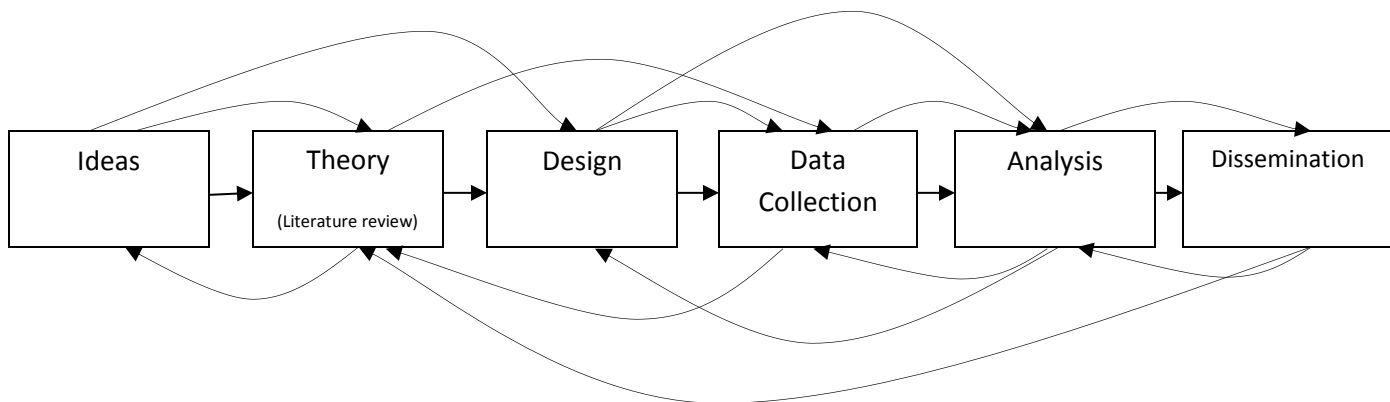
Figure 1.2. The Spiralling research approach (Berg, 2007, p. 24)

This approach and how it impacted on decisions in this study will now be examined.

1.7.2. Ideas

The idea for this study originated from my interest in the high incidence of fraud as reported in the media. My interest was further stimulated by the number of high profile companies (Enron, WorldCom, Saambou, The arms deal of the current South African Government) and individuals (Mr. Bernie Ebbers, Mr. Ken Lay, Mr. Jeff Skilling) who were named in the fraud cases. Further, according to Jaccard and Jacoby (2010), the first step in theory construction involves the generation of ideas about new explanatory constructs and the relationships between them. Hence, my initial perception was that fraud seriously threatens the economic survival of many organisations in South Africa in particular, and from the various news sources it appears as if fraud is increasing despite the efforts of government and public institutions to limit and prevent it. Based on this initial perception, I realised that there might be an alternative explanation for the relatively high incidence of fraud in organisations, and that organisations as living organisms that mirror individuals' motives need to examine themselves to determine the incidence of fraud. Hence, I thought the "personality" of the organisation – the climate-

might help to explain and predict the role organisations play in fraud. Therefore, I received a clear research task: to attempt to point out what type of organisational climate was conducive to employees committing fraud.

After consulting the literature, I narrowed my research to focus specifically on management fraud, as this is the most costly form of fraud and currently there is no viable theory to explain the role of organisational climate on management fraud. From the literature there seems to be a disparity in this regard, which this study aims to address.

1.7.3. Literature Review

The first and foremost use of a literature review, according to Henning et al. (2004), is to provide the contextualisation for the arguments of one's study and to provide the niche to be occupied by one's own study. And although researchers engaged in qualitative research cannot be sure what literature might be relevant to their study until they have completed their research, Jaccard and Jacoby (2010) believe that once an initial idea for the study has been conceptualised, a researcher needs to begin examining how others have already thought about and researched the topic as this allows the researcher to gain perspective on the phenomenon or question/problem (Maxwell, 2013; Taylor & Bogdan, 1998). With Denyer and Tranfield (2006, p.216) emphasising the role of the literature review in linking the present and past:

> "The need for research synthesis can only be realised when one understands that in order for the gains in scholarship to be cumulative, there must be a link between the past and future research."

This past perspective of the phenomenon allows the researcher in the field of management to build, through small incremental steps, upon previous work, through

identifying gaps in the existing theories (Denyer & Tranfield, 2006; George & Bennet, 2005). In addition to building on the previous work, additional perspective is gained from the literature review as it provides an orientation framework for the researcher to map the variables and relationships from the literature, to see the overlaps, contradictions, refinements and qualifications and to provide useful information regarding established and generally accepted facts about the situation being studied (Amaratunga & Baldry, 2001; Denyer & Tranfield, 2006; Eisenhardt & Graebner, 2007; Hart, 2005; Maxwell (2013); Miles & Huberman, 1994). Further, the literature search may provide a wealth of ideas for research as a literature review will expose the researcher to new ideas and methods (Sommer & Sommer, 2002; Zechmeister, Zechmeister & Shaughnessy (2001). Therefore a literature review assists researchers in their approach, what concepts to include, how others define and measure these concepts and what questions remain to be answered (McTavish & Loether, 2002).

Although Denyer and Tranfield (2006) emphasise that reviews of existing literature are a critical competence for a scholar in the field of management, Oosthuizen (2009) cautions that a literature review should not been seen as a detached section of information, but that it should be integrated with the rest of the data. In this study and in line with the spiralling approach followed, the literature guided this study at different stages. The literature was used to gain an understanding of management fraud, organisational climate, qualitative research and theory formulation. Further, the literature assisted the researcher in compiling the model, by developing a theoretical understanding of the relationship between management fraud and organisational climate.

The third stage according to the Spiralling approach as followed in this study, will now be examined and serves to justify the role qualitative research plays in the social sciences, and will inform the reader as to why the researcher chose this particular research approach.

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1.7.4. The Research Design

"The fox knows many things, but the hedgehog knows one big thing," a verse from the seventh-century Greek poet Archilochus (Thomas & Magilvy, 2011, p. 151).

This metaphor serves as an accurate but simplistic description of the major differences between quantitative and qualitative research and will be used to guide the discussion on my decision to utilise qualitative research in this study by examining the type of research, the research approach, the unit of analysis and steps taken to ensure the quality of the research. (Eisner as cited in Thomas & Magilvy, 2011).

1.7.4.1. Type of research

The difference between qualitative and quantitative research can be distinguished by the philosophical assumptions brought to the study (e.g. deductive versus inductive), the types of research strategies (e.g. experiments versus case studies), and the specific research methods used in the study (e.g. structured survey versus observation) (Wisdom, Cavaleri, Onwuegbuzie & Green, 2012).

Qualitative researchers, who represent the hedgehogs in the metaphor, focus their attention on depth by identifying a single phenomenon while burrowing deep and staying focussed on a single spot (phenomenon/experience). The purpose of qualitative researchers is not to generalise to other subjects or settings, but to explore a deeply specific phenomenon or experience on which to construct further knowledge (Thomas & Magilvy, 2011). A key definition that highlights the approach followed in qualitative research is provided by Denzin and Lincoln (2000, p.3):

"Qualitative research is a situated activity that locates the observer in the world. It consists of a set of interpretive, material practices that make the world visible... At this level, qualitative research involves an interpretive naturalistic approach to the world. This means that qualitative researchers study things in their natural settings, attempting to make sense or to interpret phenomena in terms of the meanings people bring to them".

Ritchie and Lewis (2003) utilise this definition inter alia, to summarise the key features of qualitative research:

1) Qualitative research aims at providing an in-depth understanding of the social world, notably social and material circumstances, experiences, perspectives and histories;

2) Samples are small and selected according to very specific criteria;

3) Data is collected during close relationships between the researcher and the research participant;

4) Data is detailed and revealing;

5) Data-analysis is open-ended and results in classifications, patterns of association, typologies and explanations;

6) Qualitative research is concerned with the interpretation of social meaning.

According to Oosthuizen (2009), qualitative research utilises research questions that seek understanding and explanation of social phenomena in their context. For purposes of this study the adapted definition of Denzin and Lincoln, as provided by Creswell (2013, p.44), which emphasises the process of research as flowing from philosophical assumptions, to interpretative lens, and on to the procedures involved in studying social or human problems, will be used in this research:

"Qualitative research begins with the assumptions and the use of interpretative theoretical frameworks that inform the study of research problems addressing the meaning individuals and groups ascribe to a social or human problem. To study this problem, qualitative researchers use an emerging qualitative approach to inquiry, the collection of data in a natural setting sensitive to the people and places under study, and data analysis is both inductive and deductive and establishes patterns or themes. The final written report or presentation includes the voices of participants, the reflexivity of the researcher, a complex description and interpretation of the problem, and its contribution to the literature or a call for change" (Creswell, 2013, p.44).

The fox in the metaphor above implies that quantitative research involves seeking statements of objective facts, prediction, generalisation and the establishment of universal law-like findings in tightly controlled research environments (Rule & John, 2011). But in the social sciences researchers investigate domains such as behaviour, thought and feelings as they occur in the real world, and therefore want to study them in their natural settings (Rule & John, 2011). While social sciences initially attempted to adopt quantitative methods to study these human and subjective domains, they have come to realise that such domains do not display law-like properties which can be claimed and proved with certainty and regularity (Henwood & Pidgeon, 1992; Rule & John, 2011). And although the discipline of psychology was more reluctant to embrace qualitative research than other social sciences disciplines such as anthropology and sociology, the need for alternative methods to study the human domain arose (Giles, 2002; Rule & John, 2011).

The initial reluctance of psychology to embrace qualitative research, according to Flick (1998), was that, traditionally, psychology had taken the natural sciences and their exactness as a model, paying particular attention to developing quantitative and standardised methods, while Giles (2002) believes that this reluctance of psychology

was due to the fact that psychology had spent a significant portion of its short history fighting for scientific status, thus in order to stave off criticism from the established scientific disciplines, psychology tended to be rather conservative in its preferred methods, valuing experimentation and insisting on measurement as the only way of meeting criteria for scientific validity (Giles, 2002).

The period of legitimisation during the 1960s further served to establish the qualitative approach as a viable and relevant methodology in the social sciences and qualitative research began to impact on psychology during the 1980s but transformed considerably towards the closing stages of the twentieth century, particularly in the United Kingdom where, in 1991, the Scientific Affairs Board of the British Psychological Society authorised a report, which advocated more extensive use of qualitative research in psychology (Babbie et al., 2010: Giles, 2002; Rule & John, 2011). In addition, according to Ponterotto (2010, p.581), the need for multicultural psychologists who are knowledgeable in multiple research paradigms and are competent in conducting both quantitative and qualitative research, is emphasised in the guidelines of the American Psychological Association's Multicultural Education, Training, Research, Practice and Organisational Change, which states:

> "Culturally centered psychological researchers are encouraged to seek appropriate grounding in various modes of inquiry and to understand both the strengths and limitations of the research paradigm applied to culturally diverse populations.... They should strive to recognise and incorporate research methods that most effectively complement the worldview and lifestyles of persons who come from specific cultural and linguistic population, for example qualitative and quantitative research strategies".

Ponterotto (2010, p.584) provides a table that emphasises the value of qualitative methods relative to traditional quantitative methods to advancing psychology in particular. According to the above researcher a review of the literature over the past

decade has uncovered strong rationales for the psychology profession to expand its repertoire of operating research paradigms and empirical procedures (Ponterotto, 2010).

Table 1.2. Specific benefits of qualitative inquiry procedures (Ponterotto, 2010, p.585)

Benefit Claim	Supporting citations
Applied psychologists are drawn to constructivist qualitative methods because they often involve studying the emotive and cognitive aspect of the participants' life experiences interpreted within the context of the socially constructed worldviews.	Hill, 2005; McLeod, 2001; Morrow, 2007; Sciarra, 1999.
Qualitative methods are useful in exploratory phases of research given their "discovery" rather than "explanatory" or "confirmatory" goals.	Hill, 2005; Morrow, 2007; Nelson & Quintana, 2005.
Qualitative research complements quantitative research by adding descriptive depth	Morrow, 2007; Nelson & Quintana, 2005.
Qualitative research is particularly useful in studying and understanding process in counselling and psychotherapy.	Hill, 2005; Morrow, 2007.
Qualitative research is effective in examining very complex psychological phenomena as it is not constrained by preselected and limited variables; such research can examine all variables as they emerge during the discovery phase.	Hill, 2005; Nelson & Quintana, 2005; Silverstein, Auerbach & Levant, 2006.

Qualitative research and writing can increase the public's understanding and receptivity to research.	Morrow, 2007; Ponterotto, 2006; Ponterotto & Grieger, 2007.
Qualitative research can effectively bridge the noted rift between the objective/hypothetico-deductive model of science (from positivism/postpositivism) and the subjective everyday experience of practitioners helping clients and patients.	Morrow, 2007.
Qualitative research is effective in establishing "procedural evidence" (i.e. study methods and findings are intelligible, consistent, and credible, and become self-evident in the iterative, emergent analysis process).	Hill, 2005; Morrow, 2005.

Denzin and Lincoln (2002); Major and Savin-Boden (2011) and Smith (2003) argue that there is currently a significant shift in psychology and that there appears to be an overwhelming renewed interest in qualitative psychology. This change is reflected in a number of ways – for example, the large number of Ph.D. students completing qualitative research projects, diverse conference presentations and the increasing numbers of qualitative articles appearing in peer-reviewed journals (Smith, 2003).

Cassell and Symon (2006) report that qualitative methodologies have a long history and tradition in organisational and management research, with early ethnographic work leading to insights into managerial experience and practice. The above authors cite the studies of Dalton's (1959) *Men Who Manage,* Watson's (1977) *The Personnel Managers* and Jackall's (1988) *Moral Mazes: The World of Corporate Managers.* Cassell and Symons (2006, p.4) argue the same point as Gummesson (2000, p.1) who

states that qualitative techniques can, in general, provide "powerful tools" for the management and organisation researcher.

Creswell (2013) states explicitly that qualitative research should be used to study variables that cannot easily be measured and to develop theories when partial or inadequate theories that do not capture the complexity of the problem exist. Reflecting on the insights gained in this section, the researcher realised that qualitative research methods can and should be used in psychological and management studies and therefore my decision to commence with qualitative research methods in this study is based on the fact that qualitative research provides a better fit for my research problem.

1.7.4.2. Modernist qualitative approach

Denzin and Lincoln (2003) divide the history of qualitative research into seven phases, with the modernist phase building on the work of the traditional period. According to Denzin and Lincoln (2003) and Schurink and Schurink (2012), the modernist qualitative approach originated between the 1940s and 1970s and included phenomenology, ethnography, symbolic interactionism, critical theory and applied action research. The strategies of inquiry employed with this approach, varied from grounded theory and case study, to the methods of historical, biographical, ethnographic and clinical research. Data collection methods included interviewing, participant observation, and the study of human documents, while data analysis included analytical induction and grounded theory (Schurink & Schurink, 2012). The focus tends to be on dynamic processes with the aim of explaining rather than predicting phenomena (Schurink & Schurink, 2012).

According to Smith (2003), the assumption of Psychology is based mainly within the modernist assumption as there is a true reality to be uncovered by the activities of its

researchers, and findings at one moment in time are the stepping stones to refined findings later on. My reasoning for applying this approach to my studies lies in the particular data-gathering and analysis methods I have applied. The design of my study is based on theory generation through theoretical review and interviews.

1.8.   UNIT OF ANALYSIS

The behaviour will be studied on the meso systems level (the group, department, division).

1.9.   ENSURING QUALITY OF THE RESEARCH

According to Berg (2007, p.14), although various technologies (qualitative/quantitative) may be used by different researchers, these researchers are still involved in science, provided that science is defined as: "a specific and systematic way of discovering and understanding how social realities arise, operate and impact on individuals and organisations of individuals".

1.9.1. Ensuring Quality in Terms of the Literature Review

Glaser and Strauss as cited in Taylor and Bogdan (1998), argue that social scientists have over-emphasised testing and verifying theories and have neglected the more important activity of generating theory. A number of authors, according to Coetzee (2007), write specifically about a 'theoretically valid conceptualisation' where new theory is developed. The following constructs will be used specifically to evaluate the validity of the proposed conceptual model: perspicuity, parsimony, structural corroboration and referential adequacy.

- The concepts described are specified with perspicuity or clarity by means of logical, systematic literature study of existing theories followed by conceptual analysis and creative speculation leading to a clear, lucid and readily understandable theory (http://www.sfu.ca).

- Parsimony refers to theory which has concepts that are mutually exclusive and are less rather than more in number and are straightforward and easy to connect with reality (http://www.sfu.ca).

- The theory in question is structurally corroborated when there is sufficient circumstantial evidence to strengthen the theory (Eisner, 2003).

- There is referential adequacy when the concepts are extensively used in propositions and theories of a related nature so that the reader can see how these concepts enlarge human understanding (Eisner, 2003).

Table 1.3. Illustrates how the constructs of a theoretically valid conceptualisation were considered

Characteristics	Description	Application in this Study
Perspicuity	Clarity of theory based on logical, systematic literature study followed by conceptual analysis and creative speculation	In order to address perspicuity in this study, a literature review on management fraud was conducted to provide a basis for understanding the context of the study. Organisational climate was utilised as a basis for understanding the interpretation of individuals

		to commit management fraud.
Parsimony	Mutually exclusive concepts which easily connect to reality	The shared understanding and clarity of the concepts was tested in the interviews.
Structural corroboration	The theory is supported by enough circumstantial evidence	There needed to be substantial data from the interviews which could be used to explore the face validity of the model.
Referential adequacy	The concepts of the theory are extensively used in theories of a related nature	The concepts of the theory needed to be considered in relation to the concepts used in management fraud and organisational climate.
Consensual adequacy	Inter-judge agreement about the theory	Certified Fraud Examiners who were both trained and experienced in fraud investigations were invited to generate hypotheses in the second round of interviews.

According to Berg (2007), replication and reproducibility is central to the creation and testing of theories and their acceptance by scientific communities. Hence this study will be conducted systematically and will be able to be reproduced by subsequent researchers.

1.9.2. Ensuring Quality of the Research/Empirical Study

This section will theoretically examine the components necessary to ensure the quality of the research and then provide a description in Table 1.4. on how the components described by Lincoln and Guba were practically considered.

Shenton (2004) states that positivists often suspect the trustworthiness of qualitative research as the notion of validity and reliability cannot be dealt with in the same way as in naturalistic product. The paradigm war that commenced forty-five years ago resulted in researchers who were racing to design research that was valid, objective and sensitive to internal and external validity and reliability (Denzin, 2010). The modernist research paradigm as followed by this study, views ethics as abstract and transferable and is more concerned with the research process itself, the rights and wrongs of how the information is collected (Gillies & Alldred, 2008). The conventional criteria for good research implies that research needs to elaborate on 1) internal validity; 2) external validity or representativeness; 3) reliability, and 4) objectivity (Schurink & Schurink, 2012, p.35).

However, according to Lincoln and Guba (1985); Schurink and Schurink (2012); and Tracy (2010), these constructs are inappropriate for naturalistic or qualitative research. What is evident from the literature is that qualitative researchers will continue to face stakeholder audiences that require rationale for the type of research conducted as ethical decisions arise throughout the entire research process, from conceptualisation and design, data gathering and analysis (Edwards & Mauthner, 2008; Tracey, 2010).

The concept of validity can be defined in numerous ways and can function differently based on different epistemological and theoretical variations (Koro-Ljunberg, 2010). However, for purposes of this study the model as proposed by Lincoln and Guba in their

classic work on naturalistic inquiry in 1985, will be used to address the trustworthiness of qualitative research (Shenton, 2004). The four components correspond to the positivist researcher and include 1) truth-value (credibility); 2) applicability (transferability); 3) consistency (dependability); 4) neutrality (confirmability) (Shenton, 2004).

The four components of Lincoln and Guba's model will now be discussed theoretically, thereafter Table 1.4. will provide a description of how the components described were practically considered, to enhance the validity and reliability of this study.

1.9.2.1. Credibility

Credibility is an alternative to internal validity which is to demonstrate that the subject was accurately identified and described. Credibility is considered as the most important criterion and can be viewed as an in-depth description that will be so embedded with data that it cannot help but be valid within the setting, population and theoretical framework carefully stated to place a boundary around the study (Lincoln & Guba, 1985; Shenton, 2004). Hence, credibility refers to trustworthiness, verisimilitude and plausibility of the research findings (Tracy, 2010, p.842).

Lincoln and Guba (1985) suggest a number of methods that can be used to enhance the credibility of qualitative research: 1) prolonged engagement and persistent observation in the field; 2) triangulation of different methods; 3) peer debriefing; 4) member checks; and 5) formalised qualitative methods such as grounded theory and analytical induction (Schurink & Schurink, 2012). While Shenton (2004, p.64) extends the above list by including: 1) the adoption of research methods well established in qualitative investigation in general and in information science in particular; 2) the development of an early familiarity with the culture of participating organisations before

the first data collection dialogues take place; 3) random sampling of individuals to serve as informants; 4) triangulation; 5) tactics to ensure honesty of informants when contributing data; 5) iterative questioning; 6) negative case analysis; 7) frequent debriefing sessions; 8) peer scrutiny of the research project; 9) the researcher's reflective commentary; 10) background, qualifications and experience of the investigator; 11) member checks; 12) detailed description of the phenomenon under scrutiny; 13) examination of previous research findings to assess the degree to which the studies results are congruent with those of past studies.

1.9.2.2. Transferability

Transferability can be viewed as the alternative to external validity or generalisability, which is sometimes viewed as the weakness of qualitative research (Coetzee, 2007; Henwood & Pidgeon, 1992). To counter this challenge a researcher can refer back to the original theoretical framework to indicate how data collection and analysis will be guided by concepts and models, clearly stating the theoretical parameters of the research. Multiple sources of data can also be used to enhance transferability (Lincoln & Guba, 1985). Jick, as cited in Binder and Edwards (2010, p.240), describes triangulation as:

> "the use of different techniques for data collection and analysis to study the same phenomenon from different perspectives."

In positivist work, this aspect lies in demonstrating that the findings of the study can be applied to a wider population. However Shenton, (2004) prominently states that the findings of a qualitative project are specific to a small number of particular environments and individuals, and hence it is impossible to demonstrate that the findings and conclusions are applicable to other situations and populations.

1.9.2.3. Dependability

Marshall and Rossman ask whether one can be reasonably sure that the findings would be replicated if the study were conducted with the same participants in the same context (Coetzee, 2007). To address this concern the positivist utilises techniques to demonstrate that if the work were repeated, in the same context, with the same methods and with the same participants, similar results would be obtained (Shenton, 2004). In contrast to the positivist assumption of an unchanging universe, the researcher attempts to account for the changing conditions in the phenomenon studied since the qualitative/interpretative assumption is that social world is always being constructed and therefore the concept of replication is itself problematic (Lincoln & Guba, 1985).

1.9.2.4. Confirmability

"Does the researcher provide evidence that corroborates the findings and interpretations by means of auditing (Schurink & Schurink, 2012, p. 36)?" This relates to the traditional concept of objectivity and relates to the point that the findings are reflective of the subjects and the inquiry itself, rather than a creation of the researcher's biases or prejudices (Marshall & Rossman as cited in Coetzee, 2007).

1.10. ETHICS

Flick (2009) and Silverman (2011) note that qualitative researchers are confronted with a number of ethical issues at every step of the research and the ethical considerations that need to be anticipated are extensive and are reflected through the research process. Ethics according to Vogt, Gardner and Haeffele (2012) is a matter of commitment to and behaviour guided by certain values. Berg and Lune (2012) highlight the aspect that among the fundamental tenets of ethical social scientific research is the

notion of *do no harm* (Berg & Lune, 2012). Plummer (2001) provides guidelines on ethics and says that ethical questions represent some of the main methodological problems when designing research. Plummer (2001) steers to the following:

- Ownership and intellectual property rights. Researchers spend considerable time with research participants and collect extensive (sometimes very personal) information from them, on the premise that it is their information. Yet when some researchers move on and publish their findings, they neither share them with the research participants beforehand nor acknowledge the research participants. They simply assume ownership and intellectual property of the information.

- Confidentiality. Stories and even short descriptions often render research participants recognisable. In addition, research participants themselves often inform others that they participated in research. Therefore guarantees offered by researchers that the research participants' identities will be protected often do not materialise. Thus confidentiality is an issue that has to be considered before, during and after a study.

- Honesty. Research participants are sometimes dishonest when telling their story and they "make up" information. This may result in incorrect findings and theoretical claims.

- Deception. Researchers sometimes do not reveal the true nature of their research, and research participants are unaware of what the outcome of the research may be.

- Exploitation. Research participants are sometimes exploited, that is, they are persuaded to provide information but their contributions are not recognised through, for instance, offering them an informal material reward (e.g. meals) or establishing formal contractual rights to possible material benefits from the research.

- Informal consent. In most cases, research participants are well aware that they are participating in a study. However, they are sometimes not informed that they feature on photographs and films included in presentations on the research.

- Hurt and harm. Some research participants may suffer emotional and/or physical harm because of a research project.

Having a strong ethical framework for a research project is vital for two reasons. Firstly, it has a protective function both for the researcher and for the researched. The second reason is that an ethical orientation supports the thoughtful conduct of the research process and the eventual credibility of the report (Cousin, 2009). The guidelines as proposed by Creswell (2014) (Table 1.4.) assists in anticipating and addressing ethical issues as they relate to different phases of the research.

Table 1.4. Ethical issues in qualitative, quantitative, and mixed methods research (Creswell, 2014, pp. 93-94)

Where in the Process of Research the Ethical Issues Occurs	Type of Ethical Issue	How to address the Issue
Prior to conducting the study	- Examine professional association standards. - Gain local permission from site and participants. - Select a site without a vested interest in the outcome of study. - Negotiate authorship for publication.	- Consult the code of ethics for professional association in your area. - Submit proposal for approval. - Identify and go through local approvals, find gatekeepers or key personnel to help. - Select sites that will not raise power issues with researchers. - Give credit for work done on

		the project, decide on author order in future publication.
Beginning the study	• Identify a research problem that will benefit participants. • Disclose purpose of the study. • Do not pressure participants into signing consent forms. • Respect norms and charters of indigenous societies. • Be sensitive to needs of vulnerable populations (e.g. children).	• Conduct a needs assessment or informal conversation with participants about their needs. • Contact participants, and inform them of the general purpose of the study. • Tell participants that they do not have to sign form. • Find out about cultural, religious, gender and other differences that need to be respected. • Obtain appropriate consent (e.g. parents, as well as children).
Collecting the data	• Respect the site, and disrupt as little as possible. • Make certain that all participants receive the same information. • Avoid deceiving participants. • Respect potential power imbalances and exploitation of participants (e.g. interviewing, observing). • Do not use participants by gathering data and leaving site.	• Build trust, and convey extent of anticipated disruption in gaining access. • Put into place wait list provisions for treatment for controls. • Discuss purpose of the study and how data will be used. • Avoid leading questions. Withhold sharing personal impressions. Avoid disclosing sensitive information. Involve participants as collaborators.

	• Avoid collecting harmful information.	• Provide rewards for participating. • Stay to questions stated in an interview protocol.
Analysing the data	• Avoid siding with participants (going native). • Avoid disclosing only positive results. • Respect the privacy and anonymity of participants.	• Report multiple perspectives. • Report contrary findings. • Assign fictitious names or aliases, develop composite profiles of participants.
Reporting, sharing and storing data	• Avoid falsifying authorship, evidence, data, findings and conclusions. • Do not plagiarise. • Avoid disclosing information that would harm participants. • Communicate in a clear, straightforward, appropriate language. • Share data with others. • Keep raw data and other materials (e.g. details of procedures, instruments). • Do not duplicate or piecemeal publications. • Provide complete proof of compliance with ethical issues and lack of conflict of interest, if requested. • State who owns the data	• Report honestly. • See APA (2010) guidelines for permissions needed to reprint or adapt work of others. • Use composite stories so that individuals cannot be identified. • Use unbiased language appropriate for audiences of the research. • Provide copies of report to participants and stakeholders. Share results with other researchers. Consider website distribution. Consider publishing in different languages. • Store data and material for 5 years (APA, 2010).

		• Refrain from using the same material for more than one publication.
		• Disclose funders for research. Disclose who will profit from the research.
		• Give credit for ownership to researcher, participants and advisors.

Prior to conducting the study, the researcher presented his proposal to key institutional gatekeepers and gained approval to embark on the study. The question of authorship and order of authorship was clarified on the onset of the study. Before commencing with the study, the researcher presented the proposal to a panel as regulated by the institution. The presentation focussed on identifying a beneficial research problem, and clarified the purpose of the study. The researcher believes that he has a clear perception and understanding of the research ontology and epistemology. The interviewees participated willingly in all the phases. Furthermore, during the interview process, the researcher fully explained the content and aim of the study. Questions remained focused on the study concepts and the researcher refrained from discussing non-applicable issues. The research participants were treated with dignity and respect and appointments were honoured. The full range of findings, including findings that were contrary to the themes were presented and the identities of the participants were protected. Steps taken to ensure an accurate account of information during the analysing, reporting and sharing phase is presented in Table 1.5. The study followed the APA (2010) guidelines for permission needed to reprint or adapt the work of others and the data and material will be stored for five years. Credit to the participants and advisors' is acknowledged in the beginning of the study. The study is also available for public and scientific critique, as no part of the study and/or the results are inaccessible to anybody.

Table 1.5. Constructs considered to enhance the validity and reliability of this study

Characteristic	Description	Application in this study
Credibility	"How congruent are the findings with reality?" (Merriam as cited in Shenton, 2004, p.64).	1. *The adoption of well-established research methods:* This study used analytic induction, Lawshe's content validity ratio and interviews to compile a theoretical model; 2. *Triangulation*: through use of different individuals in the sample. Different individual viewpoints and experiences were verified against one another and a rich picture of the attitudes, needs or behaviour of those being investigated was constructed. 3. *Tactics to help ensure honesty in informants when contributing data:* Each person interviewed was given the opportunity to refuse to participate in the project; 4. *Peer scrutiny of the research project was frequently done by my promoter:* In addition this research was discussed during a formal workshop with colleagues and video-taped for referral. 5. *Member checks:* Guba and Lincoln as cited in Shenton (2004), list this provision as the single most important characteristic to emphasise a study's credibility. In terms of this study the information supplied by the interviewees was read back to them to

		check the accuracy of the data, and verification of the emerging theories formed during the dialogue was checked during the interview.
		6. *Detailed description of the phenomenon under investigation:* Detailed description through a literature review and methodology added credibility as it helped to convey the actual situation and context of the problem.
		7. *Examination of previous findings:* Previous findings related to similar research will be provided in Chapter 6.
Transferability	Merriam as cited in Shenton (2004, p.69) views this characteristic as "the extent to which the findings of one study can be applied to other situations".	This study aimed to clarify the following in order to enhance this characteristic: 1. Data collection methods that were employed were discussed; 2. The average length and number of each interview was mentioned; 3. The time span of the data collection was stated.
Dependability	If the study is replicated then similar findings will be obtained	The research design of this study is documented and detailed.
Confirmability	Findings will be confirmed by an objective other.	A data orientated approach was followed in this study, which specifically illustrates how the data was gathered and processed.

Proper ethical consideration was given to the study to ensure that no harm could arise to any person as a result of the research, while it is acknowledged that a researcher's ethical responsibility to conduct meaningful and trustworthy research extends beyond duty, mechanical approaches and pre-described solutions (Koro-Ljungberg, 2010). Therefore this researcher attempted to heed the advice of Koro-Ljungberg (2010) and not rely solely on textbook validity, but accept responsibility for conducting this research in an ethical, meaningful and trustworthy fashion.

1.11. RESEARCH METHOD

The proposed research method which will be followed is illustrated in Table 1.6.

Table 1.6. Research method

PHASE 1	LITERATURE REVIEW
Step 1	Literature review to provide a basis of management fraud theory.
Step 2	Literature review on organisational climate.

PHASE 2	EMPIRICAL STUDY
Step 1	Data gathering by means of individual interviews during which the theoretical model will be presented and the insights of participants will be used to evaluate the face validity of the theoretical model.
Step 2	Dictation of the interview audiotapes.
Step 3	Interpretation of the data.
Step 4	Linking the interpreted data to the conceptualised model.
Step 6	Adapting model to accommodate interpreted data from participants.

Step 7	Data gathering by means of individual interviews during which the amended theoretical model will be presented and the insights of participants will be used to evaluate the face validity of the theoretical model.
PHASE 3	**CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS**
Step 1	Reporting on how the findings comply with the set aims.
Step 2	Answering the research questions and solving the formulated problem.
Step 3	Reporting on the limitations of the research.
Step 4	Making recommendations about the use of the theoretical model.
Step 5	Making recommendations for future research.

1.12. OVERVIEW OF THE PROPOSED STUDY

The rest of the proposed study includes the following chapters:

Chapter 2 focuses in general on fraud, with management fraud being the focal point of this study. Current models and approaches to detect and prevent management fraud will be examined. Further, the difficulty and complexity in detecting management fraud using traditional methodologies will be exposed and the need for an alternative detection/prevention model will be highlighted.

Chapter 3 will focus on organisational climate to explore the underlying reasons why managers in an organisation commit fraud. This chapter highlights the role that organisational climate plays in management fraud with specific reference to ethical climate.

Chapter 4 will present the initial conceptual management fraud climate model, by applying the first five steps of Dubin's methodology.

Chapter 5 will focus on how the sampling of participants in this study was conducted, by exploring both the rationale behind the sampling approach and the selection of the participants.

Chapter 6 will provide the results of the study and an exposition of the proposed conceptual model will be given. The theoretical conceptual model will be revised according to the empirical information and adjusted accordingly.

Chapter 7 of the study will highlight the conclusions, limitations and recommendations of the research.

1.13. SUMMARY

The aim of this chapter was to illustrate the importance of the planned research by providing the background to and motivation for the research. After the motivation and background were discussed, the focus of this chapter shifted to clarifying the research problem and aims. Further, the paradigm perspective, key scientific beliefs and building blocks, and the research design and approach were explored. In addition, this chapter provided information on how the quality of the study was ensured, while the final section provided an outline of the planned chapters of the intended study.

The next section will focus on a discussion of the literature relevant to this study.

CHAPTER 2: MANAGEMENT FRAUD

2.1. INTRODUCTION

This chapter commences by viewing fraud in a historical context before providing a conceptualisation of fraud. After proposing a suitable fraud definition that is to be used in this study, the difference between negligence and fraud is examined. The various types of fraud an individual may encounter in organisations are then classified into manageable categories before the conditions under which fraud may occur are examined. The role of the behavioural sciences in understanding the reasons for fraud is stressed through examining both individual and organisational characteristics affecting ethical behaviour.

The chapter's focus then shifts to a particular type of fraud, namely management fraud, and explores firstly the historical context of this specific type of fraud before offering a conceptualisation of it. After proposing a workable definition for this study, the characteristics of management fraud perpetrators are examined, as well as the different types of management fraud and reasons for management to commit fraud are considered. Once the differences of this fraud have been clarified the study then moves to how management fraud is currently detected and prevented, and discusses the shortcomings in the traditional approaches to management fraud prevention and detection and stresses the need for alternative behaviouristic prevention/detection approaches. This chapter sets the scene as to how organisational climate can be used to detect and prevent management fraud.

2.2. HISTORICAL CONTEXT OF FRAUD

In the 1866 law journal *Temple Bar* a contemporary observer wrote:

> *"Go where you will, in business parts, or meet who you like of businessmen, it is… the same story and the same lament. Dishonesty, untruth, and what may, in plain English, be termed mercantile swindling within the limits of the law, exist on all sides and on every quarter"* (Hotten as cited in Pomeranz, 1995, p.15).

Fraud is believed to be of archaic origin as in ancient societies man is said to have had a religiously rooted reverence for his social superiors, to whom he felt he ought to bring propitiating gifts, as one did to gods, spirits and demons (Pomeranz, 1995). However, "civilization" dismantled the traditional network, and replaced it with a rootless and often abusive bureaucracy and the tribal connection remained as the only genuine political reality in most of the third world (Pomeranz, 1995). This abuse and dismantling of the traditional network resulted in forensic accounting being one of the oldest professions, which can be dated to the Egyptians (Singleton & Singleton, 2010). The "forensic accountant" of the king was watchful over inventories of grain, gold and other assets and therefore this person was expected to be trustworthy, responsible and able handle a position of influence (Singleton & Singleton, 2010).

In England it took William the Conqueror to introduce the first English administrative system designed to prevent and detect fraud, while in America fraud began as early as the landing of the Pilgrim fathers and other early settlers (Singleton & Singleton, 2010; Tickner, 2010). According to Lenard and Alam (n.d.), in Britain during the 1400s there was a position of "royal auditor" and while the British investors sending colonists to America used accountants, auditing became more formal in the United States and Britain with the revision of the British Companies Clauses Consolidated Act in 1845.

The temptation to commit fraud has always been prevalent, with President Abraham Lincoln during the Civil War in America complaining of defence contractors who sold faulty war supplies to the Union Army, including "broken rifles, rancid food, useless ammunition and lame horses and mules" (Ostas, 2007, p.598). Documenting fraud throughout the 1920s Professor William Laufer writes: "Throughout the 1920s there were bank frauds by a host of well-known corporations and stock frauds by top-tier investment firms; even some fraud examiners were accused of fraud". He continues: "The list of swindles and schemes reveal thousands of individuals and hundreds of corporations. By 1925 the annual loss to stock fraud, insurance fraud, credit fraud and embezzlement in the United States was estimated at $3 billion" (Ostas, 2007, p.598).

What is evident from the above examples is that fraud is as old as humanity itself and has always been part of the business environment, and it can assume an unlimited variety of different forms and is therefore a global problem that impacts to a varying degree all organisations of different types and sizes (Giroux, 2008; Murdock, 2008). The next section will provide various definitions of fraud and then formulate a definition to be used in this study.

2.3. CONCEPTUALISATION OF FRAUD

Silverstone and Sheetz (2007) suggest that the modern definitions of fraud are derived principally from case and statutory law, but a significant part of the ancient elements remain, which can be traced to *fraus*, a Latin noun carrying a wide range of meanings clustered around the notions of harm, deceit and wrongdoing. The modern definitions of fraud focus on the intent of the perpetrator to separate the trusting victim from property or a legal right through deception for his or her own benefit. This deception includes inter alia, false or misleading words or actions or omissions or concealment of facts that will cause legal injury (Silverstone & Sheetz, 2007). This study will now proceed to examine various definitions of fraud that emphasise the intent of the perpetrator and the consequences of fraud.

Larson (as cited in Pomeranz, 1995, p.16) defines fraud as follows:

> "…any wilful or conscious wrongdoing that adversely affects the government's interests.…The following are examples of fraud or other unlawful activity:… charging personal expenses to government contracts; diversion of government property of funds for authorized uses; submission of false claims…; intentional mischarging…, regulatory or statutory violations, such as bribery, theft…, graft, conflict of interest, and (acceptance of) gratuities; and any attempt or conspiracy to engage in or use the above devices."

Larson's definition, although comprehensive, seems to apply specifically to fraud within the government sector and therefore additional broader definitions of fraud need to be explored.

The following preceding definitions highlight the role of the perpetrator in the fraud transaction and emphasize the consequences of fraud.

Ramamoorti & Olsen (2007, p.53) define fraud as: "… a human endeavor, involving deception, purposeful intent, intensity of desire, risk of apprehension, violation of trust, rationalization, etc."

Lopes de Sá and Hoog, as cited in Murcia and Borba (2007, p.165), provide a definition that accentuates the affects of fraud on the individual: "Fraud is a planned malicious act aiming to obtain personal advantage by causing harm to others".

Silverstone and Sheetz (2007, p.3) provides a similar definition that emphasises the consequences of fraud: "Fraud is an activity that takes place in a social setting and has severe consequences for the economy, corporations and individuals. It is an opportunistic infection that bursts forth when greed meets the possibility of deception".

The above three definitions of fraud highlight the importance of understanding the psychological factors that might influence the behaviour of individuals who are involved in fraud. Ramamoorti and Olsen (2007) are of the opinion that many business professionals, especially those in the finance field, tend to discount behavioural explanations for incidence of fraudulent activity. But as the incidents of fraud continually increase, so does the spotlight fall on the behavioural factors that may be an important approach to not only fraud detection, but to deterrence as well.

Ostas (2007, p.571) defines fraud based on the definition as found in Black's law dictionary 685 in the following manner: "Fraud is a generic term that encompasses the multifarious and often ingenious means by which one individual can gain an advantage over another through deliberate false suggestion, concealment, or mispresentation of the truth".

Bota-Avram provides the following definition of fraud: "… encompasses an array of irregularities and illegal acts characterized by intentional deception, either for the benefit or detriment of the organisation by internal or external persons" (Bota-Avram, 2008, p.183).

Bota-Avram's definition is important for this study as it highlights the consequence of fraud for an organisation. Siiro (2008) highlights the impact of fraud on the working environment, by stating that fraud is committed by individuals who work in an ever-changing environment and who are motivated by pressure, opportunity and rationalization. The five basic elements of fraud as provided by the various definitions above are:

1. A false representation of a material nature;
2. Knowledge that the representation is false or reckless disregard for the truth;
3. Reliance on the false representation by the victim;
4. Financial damages are incurred (to the benefit of the perpetrator)
5. An act that was intentional (Rezaee & Riley, 2010, p.6).

What is evident from the above definitions is that many researchers and bodies have attempted to provide all-embracing definitions of fraud, particularly the major accounting and auditing organisations. However the majority of these definitions were either incoherent, too detailed and therefore lacking clarity, or too orientated towards the accountancy profession (Tickner, 2010).

Based on the elements of fraud and in response to the above view, Tickner (2010, p.5) provides the following definition of fraud:

"Fraud is an offence resulting from dishonest behaviour that intentionally allows the fraudster or a third party to gain, or cause a loss to another. This can occur through false representation, failure to disclose information or abuse of position."

Albrecht et al. (2009, p.7) states that although there are many formal definitions of fraud, the most widespread- as it emphasises the behavioural components involved in fraud- is the following:

"Fraud is a generic term, and embraces all the multifarious means which human ingenuity can devise, which is resorted to by one individual, to get an advantage over another by false representations. No definite and invariable rule can be laid down as a general proposition in defining fraud, as it includes surprise, trickery, cunning and unfair ways by which another is cheated. The only boundaries defining it are those which limit human knavery."

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From this definition of fraud it is clear that any type of fraud, in any industry, involves deception at its core and includes surprise, trickery, cunning and unfair means to cheat another person (Albrecht et al., 2009; Jans, Lybaert & Vanhoof, 2009). Although Tickner's (2010) definition of fraud emphasises the deliberate aspect of fraud, this deception can be unintentional and therefore it is vital to distinguish between negligent and intentional deception.

2.3.1. Difference Between Negligence and Fraud

Fraud involves deception, while negligent behaviour involves failing to do what is considered reasonable and prudent for a individual in their position under the circumstances (Ball, 2009). Hence, according to Ball (2009) negligence involves managers or auditors making unintentional errors due to factors that include inadequate experience, training, knowledge, supervision or effort. Unintentional misrepresentations of facts are considered to be intellectual failings, not moral ones, while intentional misrepresentations are deliberate and can be considered an ethical problem (Constantin, 2010). Hemraj (2004) warns that a genuine mistake discovered later and not rectified but covered up, may become fraud.

In 1982, the International Federation of Accountants issued the International Statement of Auditing (ISA) No 11, which explains that the difference between errors and fraud is intent and refers to errors as: "error refers to unintentional misstatements or omissions of amounts or disclosures in the financial statement (Spathis, 2005, p.179).

Fraud according to Ball (2009) in terms of definitions provided in section 2.2., is a more serious transgression and it involves intent or gaining advantage over another through false pretence (Albrecht et al., 2009). Rezaee and Riley stress that fraud is: "an intentional act committed to harm or injure others, securing an unfair or unlawful act" (Rezaee & Riley, 2010,

p.4). Fraud refers to an intentional act to obtain undue benefit from a certain situation and always involves deception, confidence and trickery (Albrecht et al., 2009; Bologna & Lindquist, 1995; Murcia & Borba, 2007). For purposes of this study the difference between errors and fraud is that fraud is intentional and comprises all acts, omissions and concealments involving an infringement of a legal or reasonable duty and consequential damage to another (Bota-Avram, 2008).

Based on the difference between errors and fraud, this study proposes the following definition of fraud that emphasises the intentional aspect of the act:

> "Fraud is a generic term, and embraces all the varied intentional means which human ingenuity can devise, to get an advantage over another. No definite and invariable rule can be laid down to achieve this advantage, as it includes intentionally 1) making false representation, 2) failure to disclose information or 3) abuse of power".

Hence, although there are many different definitions of fraud, with each country having their own definition of fraud, the quintessence is that fraud involves intentionally breaking the law and/or violating the regulatory framework (Jones, 2011). The various ways of breaking and/or violating the regulatory framework will be discussed in the next section

2.4. TYPES OF FRAUD

The many definitions of fraud emphasise some of the types of fraudulent acts which can occur, and may include interalia, the submitting of dishonest claims, tampering with scales and measures, artificial bookkeeping, tax evasion and intentional lying in contractual negotiations (Ostas, 2007). Bota-Avram (2008) provides further examples of the types of fraud: manipulation, falsification or alteration of records or documents, suppression of

information, transactions or documents, recording of transactions without substance and misapplication of accounting principles, while Siirro (2008) adds to the list six different types of fraud that may occur: skimming, lapping, fictitious vendors, ghost employees, expense reports, earnings management. Additional fraud types include, amongst others: duplicate payment fraud; multiple payee fraud, shell fraud, defective delivery fraud, defective receipt fraud, defective shipment fraud and defective pricing fraud (Pednault, 2009). New technologies have also provided additional ways for individuals to commit fraud as traditional forms of fraud have become easier to perpetrate and have been augmented by new kinds of fraud such as mobile telecommunications fraud and computer intrusion (Bolton & Hand, 2002).

Albrecht et al. (2009), complements the different types of fraud by providing a description of a number of different fraud types. See Table 2.1.:

Table 2.1. Different types of fraud (Albrecht et al., 2009, p.10)

Type	Description
Employee embezzlement:	Most common type of fraud is when employees use their positions to take or divert assets belonging to their employer;
Vendor fraud	Vendors either overbill or provide lower quality or fewer goods than agreed;
Customer fraud:	Customers don't pay, pay too little, or get too much from the organisation through deception;
Management fraud:	Management doctors the financial statements to make the company appear in a better position than it is. This is the most costly type

	of fraud;
Investment scams:	Are committed on the Internet and in person and obtain the trust of individuals to get them to invest money in valueless schemes
Other types	Any time anyone takes advantage of the confidence of another person to deceive him or her.

A South African study conducted by Gloeck and de Jager (2005), identified the following types of fraud as occurring most frequently: bribes, fruitless and wasteful expenditure, irregular expenditure, procurement fraud, unauthorized expenditure, inventory theft, fraudulent claims, leave fraud, asset theft, cheque fraud, salary fraud and other fraud.

What is evident from the above section, is that there are many kinds of fraud, with the only boundaries defining it being those which limit "human knavery" (Albrecht et al., 2009; Coenen, 2009; Murdock, 2008). For purposes of this study, the large number of fraudulent practices, are not discussed individually, but are classified into manageable fraud categories. The next section will propose a fraud classification category that will be used in this study.

2.5. CLASSIFICATION OF FRAUD

Despite the large number of definitions of, types of and reasons for fraudulent behaviour, fraud can be classified into two broad categories, namely asset misappropriation (employee fraud) and financial misstatements (management fraud) (Rezaee & Riley, 2010). Figure 2.1. provides a diagrammatic representation of how a number of fraudulent activities can be classified into two main groups.
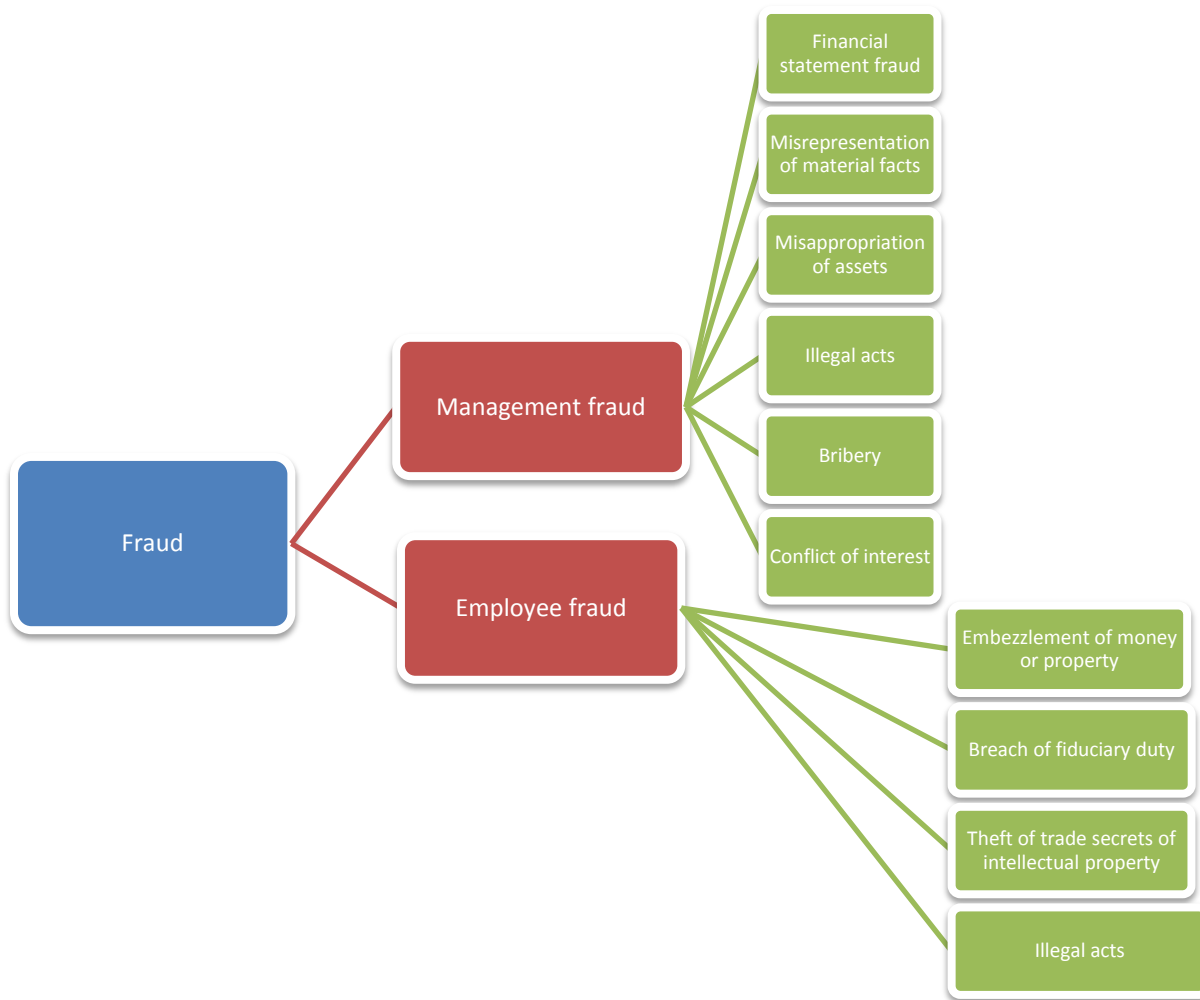
Figure 2.1. Types of fraud (Rezaee & Riley, 2010, p.6)

Murcia and Borba (2007), divide fraud into the same two main groups, misappropriation of assets and financial statement fraud, also known as management fraud. Pedneault (2009) concurs with the above authors by stating that the two main areas of fraud in the accounting world are management fraud, also known as financial statement fraud, and employee fraud or embezzlement.

In contrast, Charron and Lowe (2008); Holtfreter (2005); Pickett (2011), provide an additional category of fraud, namely corruption. Lister (2007) concurs with Charron; Lowe and Holtfreter and Pickett, by stating that there are three main branches of fraud and provides a Fraud Tree model that illustrates how examples of fraudulent activities are related to each branch.
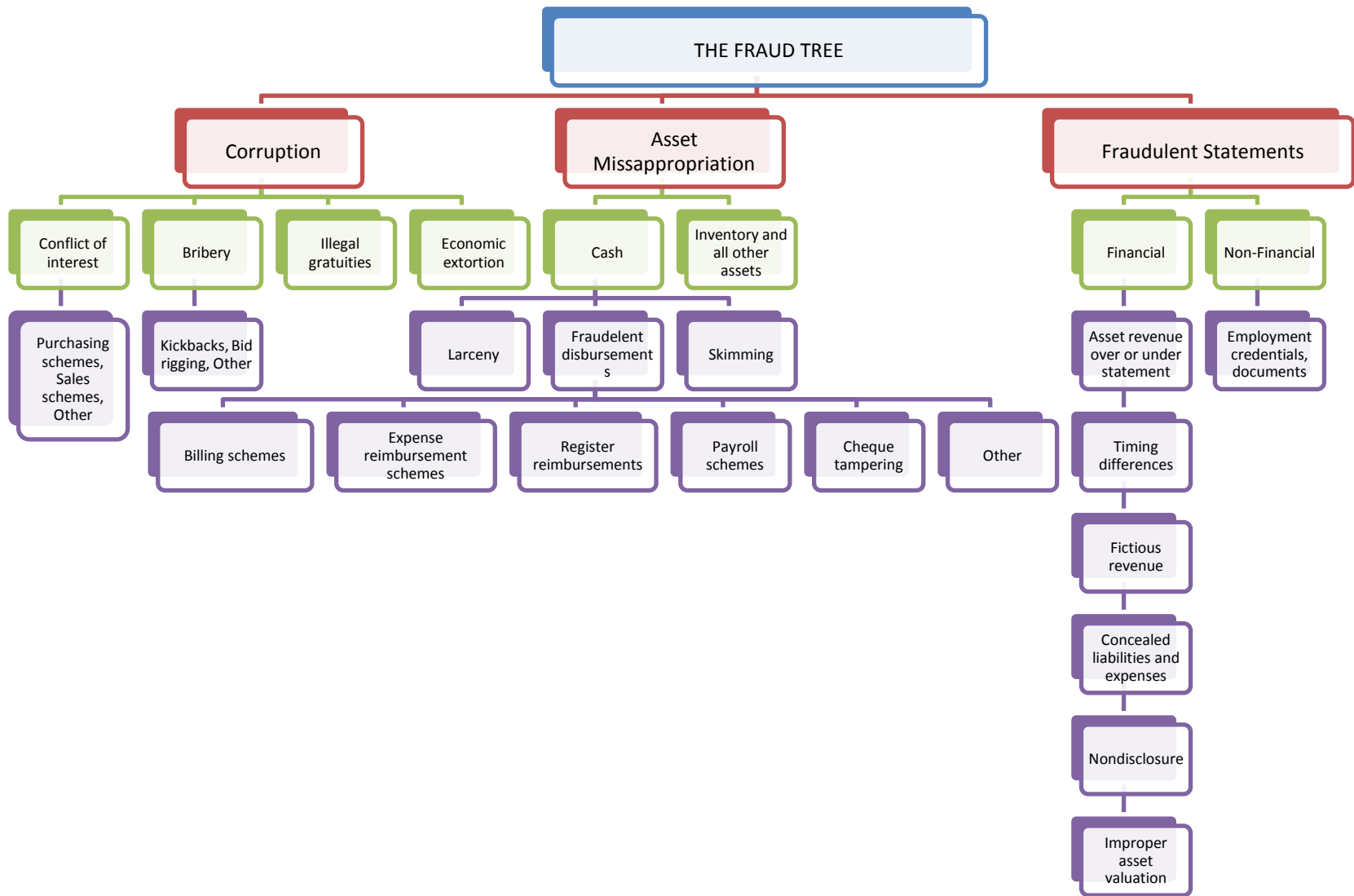
Figure 2.2. The Fraud Tree (Lister, 2007, p. 63)

For the purposes of this study, the classification according to Charron and Lowe; Holtfreter and Lister, will be explored, as this classification groups the various types of fraud into manageable compartments. In addition, although each of the classification groups is unique, each has four elements in common: 1) firstly it is concealed, 2) it violates the perpetrators fiduciary duties to the organisation, 3) it is committed for the purpose of direct or indirect financial benefit to the perpetrator and 4) it costs the employing organisation assets, revenues or reserves (Holtfreter, 2005). Lister (2007) implies that understanding the various categories and types of fraud that can be perpetrated against an organisation will assist key stakeholders in determining the fraud risk inherent in organisations, and therefore the next section will discuss the three main classification groups (corruption, asset misappropriation and management fraud) of fraud in general, while focussing primarily on management fraud.

2.5.1. Corruption

By referring to a treatise on public administration dating back to the fourth century B.C. in India, Tanzi (1998) and Bardhan (1997, p.1320) state that corruption is an ancient problem. The then Prime Minister of India, Kautiliya wrote in a book Arthasastra:

> "Just as it is impossible not to taste the honey (or the poison) that finds itself at the tip of the tongue, so it is impossible for a government servant not to eat up, at least, a bit of the king's revenue. Just as fish moving under water cannot possible be found out either as drinking or not drinking water, so government servants employed in the government work cannot be found out (while) taking money (for themselves)".

Years later corruption was viewed in similar fashion, with Dante placing bribers in the deepest parts of Hell, Shakespeare providing corruption a prominent role in some of his plays, and even the American Constitution making bribery and treason the two explicitly mentioned crimes that could justify the impeachment of a United States president

(Tanzi, 1998). What is evident is that corruption is an ancient problem, with Albrecht et al. (2009) stating that corruption is one the oldest white collar crimes known to mankind and involves the tradition of "paying off" public officials or company insiders for preferential treatment. Pillay et al. (2012) states that, in almost all African countries corruption has become, a common and routine element of the functioning of the administrative and para-administrative apparatus, from top to bottom, and corrupt transactions are as prevalent as ever, with recent scandals including the corrupt $4.8 billion European arms deal of the South African government affecting politicians (including presidents and prime ministers) in developed and developing countries (Collins, Uhlenbruck & Rodriguez, 2009, Perry, 2012; Tanzi, 1998; Treisman, 2000). However despite the negative connotation of corruption, Hung Mo (2000) states that theoretically the literature of corruption reaches no agreement about the effect of corruption on economic growth, with a number of researchers- Leff, Huntington; Acemoglu and Verdier, as cited in Hung Mo (2000), actually suggesting that corruption is desirable and raises the efficiency of an economy. The above authors state that corruption works like a piece-rate system for bureaucrats, which in turn induces a more efficient provision of government services and allows entrepreneurs to bypass inefficient regulations.

Although the definition of corruption has not progressed significantly from Heidenheimer's groundbreaking distinction in the 1970s, it is still difficult to derive a concise definition of corruption, despite the large body of literature and large number of interdisciplinary studies on the subject and that any effort at a normative or positive definition of corruption is dependant on economic, political and social factors (Breit, 2010; Chinhamo & Shumba, 2007; Kurer, 2005; Mills & Weisberg, 2008). Heidenheimer accredits the definitional problems with the many shades that corruption takes and the complex processes of decision making (Chinhamo & Shumba, 2007). Chinhamo and Shumba (2007) identify two different groups in the literature: The first group defines corruption based on the behaviour of the person, while the second group defines corruption by examining the relationship between and among the parties involved.

A definition that highlights the office of the perpetrator is provided by Bardhan (1997, p. 1321):

> "the use of public office for private gains, where an official (the agent) entrusted with carrying out a task by the public (the principal) engages in some sort of malfeasance for private enrichment which is difficult to monitor for the principal".

The most universal definition of corruption, which is utilized by the World Bank is provided by Tanzi (1988, p.564) and is adapted by Treisman (2000, p.399): "the abuse of public power for private belief" and "the misuse of public office for private gain".

However despite that fact there has been a large body of research conducted on corruption, three factors perplex the study of corruption and add to the intricacy: 1) corruption is difficult to define; 2) difficult to measure; and 3) difficult to observe (Collins et al., 2008). Although the concept of corruption may be difficult to define or describe, corruption is generally not difficult to recognise when observed, with different observers in the majority of cases concurring whether a particular behaviour denotes corruption or not (Tanzi, 1998). The following table as provided by Albrecht et al. (2009) provides a description of four different types of corruption that may occur.

Table 2.2. Types of corruption (Albrecht et al., 2009, p.516)

Type of Corruption Scheme	Description
Conflict of interest	Any scheme in which an employee, a manager, or an executive has an undisclosed economic or personal interest in a transaction that adversely affects the company as a result
Bribery	Any scheme in which a person offers, gives, receives or solicits something of value for the purpose of influencing an official act or a business decision without the knowledge or consent of the principal.
Illegal gratuities	Any scheme in which a person offers, gives, receives or solicits something of value for the purpose of influencing an official act or a business decision without the knowledge or consent of the principal.
Extortion	The coercion of another to enter into a transaction or deliver property on wrongful use of actual or threatened force, fear or economic duress.

Tanzin (1998, p.565) adds to the above categories by providing the following additional categories of corruption:

- Bureaucratic (or "petty") or political (or "grand") for example corruption by the bureaucracy or by the political leadership;
- Cost reducing (to the briber) or benefit enhancing;
- Briber initiated or bribe-initiated;
- Coercive or collusive;
- Centralised or decentralised;
- Predictable or arbitrary; and

- Involving cash payments or not.

What is evident from the literature is that corruption can be caused by individual, environmental and organisational characteristics and has many different forms. Furthermore it does not only occur in the public sector, as the private sector being also prone to a large number of different kinds of corruption: but its defining characteristic is that the colluding parties conspire together to enable the intended event to happen (Bardhan, 1997, den Nieuwenboer & Kaptein, 2008, Tickner, 2010). Tanzi (1998), further states that corruption even exists in private activities regulated by the government.

The second category of fraud, according to Lister's Fraud Tree, model is asset missappropriation.

2.5.2. Asset Missappropriation

According to Lowe and Charron (2008); Pedneault (2009); Pickett (2011), asset missapropriation comprises the majority of frauds and includes the theft or misuse of an organisation's assets. Murcia and Borba (2007, p.166) defines asset misappropriation as follows: "Improper use of resources and assets of the organisation for personal benefit".

Although asset misappropriations account for 90% of all occupational frauds, it has the lowest median loss of all types of occupation frauds (Pickett, 2011; Silverstone & Sheetz, 2007). In a study conducted in 2008 by the Association of Certified Fraud Examiners (ACFE), it was reported that employees below managerial level committed the greatest percentage of employee theft, at 39.9%, compared to 37.9% by manager-

level employees and 22.2% by owners or high ranking management employees (Pednault, 2009). The same study reported that asset misappropriation accounted for 88.7% of fraud cases reported, with an average loss of US$200 000. Asset missappropriation includes stealing inventory, skimming and payroll fraud (Lowe & Charron, 2008). Skimming is often called "front-end fraud" and is described by Siiro (2008) as one of the most difficult frauds to detect as the transactions are never recorded (Bologna & Lindquist, 1995). Skimming occurs when the cash is taken before it is deposited into the bank account and occurred in 28.2% of the cash frauds (Siiro, 2008; Silverstone & Sheetz, 2007). Skimming is common in cash businesses such as restaurants, bars, vending machines, gas stations and retail stores (Bologna & Lindquist, 1995).

Misappropriation of assets and financial statement fraud occur simultaneously as the manipulation of accounting figures and the diversion of funds by members of the organisation are committed together with both fraud types, resulting in financially misleading statements (Jaffar et al., 2007; Murcia & Borba, 2007).

2.5.3. Management Fraud

The third classification, according to Lister's Fraud Tree, is management fraud. Management fraud is the focus of this study and therefore will be discussed in detail. At this stage, for purposes of clarity, the definition as proposed for use in this study is provided:

> "A group of knowledgeable, highly educated perpetrators, who are in a position of power, trust, respectability and responsibility, who through well planned collusive schemes abuse the trust and authority normally associated with the position for personal and/or organisational gains."

This section dealt with the three branches of fraud that may occur in organisations. The next section explores the conditions which are necessary for each type of fraud to occur in organisations.

2.6. CONDITIONS UNDER WHICH FRAUD MAY OCCUR

"When times are good, people steal. When times are bad, people steal more!"
(Singleton & Singleton, 2010, p.1).

Certain researchers have assumed a big-picture approach and argue that fraud is the inevitable outcome of the competitive ethic of capitalism (Silverstone & Sheetz, 2007). According to this theoretical approach, competition is the field on which egotism and recklessness can have full play. In capitalism people are constantly bombarded by descriptions of affluence and success that can only be achieved through winning (Silverstone & Sheetz, 2007). The inevitable result of such competition is the recognition of the economic inequality of losers and winners, which can be internalised as the constant fear of failure. This fear and discontentment may be sufficient to make a person view fraud as the great equalizing act. Hence the need for money and success is the motivator (Silverstone & Sheetz, 2007). While Pedneault (2009), is of the view that the motivations behind fraud vary by the type of fraud, as well as by individual case. In general, according to Pedneault (2009), the overall theme behind committing fraud is some type of financial gain or incentive, but the specific fraud may or may not involve actually receiving monetary enrichment.

Despite the fact that fraud has sadly become part of the history of capitalism, it occurs in both public and private organisations, with smaller firms being the most susceptible to fraud (Brewer, 2008). The following additional external factors as listed by Pomeranz (1995), can be seen as some of the causes of fraud: recession, employee

dissatisfaction, indifference to internal control, possible erosion of business ethics, difficulties of teaching ethics and technological complexity. In light of the above, a researcher may conclude that fraud is caused primarily by factors external to an individual (Bologna & Lindquist, 1995).

However, recent theorising raises the question as to why certain people commit certain crimes in certain situations and hence the focus has shifted to the situation in which the crime is committed (Silverstone & Sheetz, 2007). The newer theories do not dismiss the role of personal history, which is important in the creation of the street criminal, but questions its explanatory powers (Silverstone & Sheetz, 2007). Silverstone and Davia (2005) warns that honest employees, who have a high degree of personal integrity may still perpetrate fraud if he/she is exposed to specific situational pressures and great opportunity. In some cases an employee with low personal integrity may not commit fraud if he or she is not exposed to situational pressures and there are strong checks, which provide little or no opportunity for fraud (Silverstone & Davia, 2005). Pedneault (2009) states that with the exception of career white-collar criminals, who may go from job to job with the sole intention of committing white collar crimes, the majority of embezzlers commence performing their jobs honestly, accurately and with integrity and while they may have had access to steal throughout their employment, they had no reason to commit fraud. However, then something changed in their lives; along came a perceived financial need that they were unable to meet. This "need" could include, amongst others, higher education tuition, out-of-pocket medical costs or gambling debt (Pedneault, 2009).

The above factors can be summarised into the following three factors: 1) a supply of motivated offenders, 2) the availability of suitable targets and 3) the absence of capable guardian-control systems (Silverstone & Sheetz, 2007). Bologna and Lindquist (1995) are of the opinion that fraud is still prevalent today despite the dire consequences, as the rewards gained often exceed the risk of apprehension and punishment. According to

Crawford and Weirich (2011); Hogan, Rezaee, Riley and Velury (2008); Rae and Subramaniam (2008) and Wolfe and Hermanson (2004), fraud is more likely to occur when the following three risk factors are present: 1) a person has an incentive (pressure) to commit fraud, 2) poor controls or oversight provides an opportunity for the individual to commit fraud, 3) and the person can rationalize the fraudulent behaviour (attitude).

The above describes the Fraud Triangle three-pronged model that was developed in the 1940s by Donald Cressey, an expert in sociology of crime and has been used extensively for a number of years to assess the three drivers of fraud- 1) need, 2) opportunity and 3) justification (Cressey, 1953; Goldman, 2010; Murdock, 1998; Intal & Thuy Do, 2002; Rezaee & Riley, 2010). Dorminey, Fleming, Kranacher and Riley (2012); Murphy, Free and Branston (2011) state that Cressey interviewed 133 individuals convicted of criminal violation of financial trust and noticed common characteristics among convicts serving time for white-collar crime. Based on his observations Cressey (1953) constructed the following three hypotheses: Trusted persons become trust violators when 1) they conceive of themselves as having a financial problem which is non-shareable; 2) are aware that this problem can be secretly resolved by violation of the position of financial trust and; 3) and are able to apply to their own conduct in that situation verbalisations which enable them to adjust their conceptions of themselves as trusted persons with their conceptions of themselves as users of the entrusted funds or property.
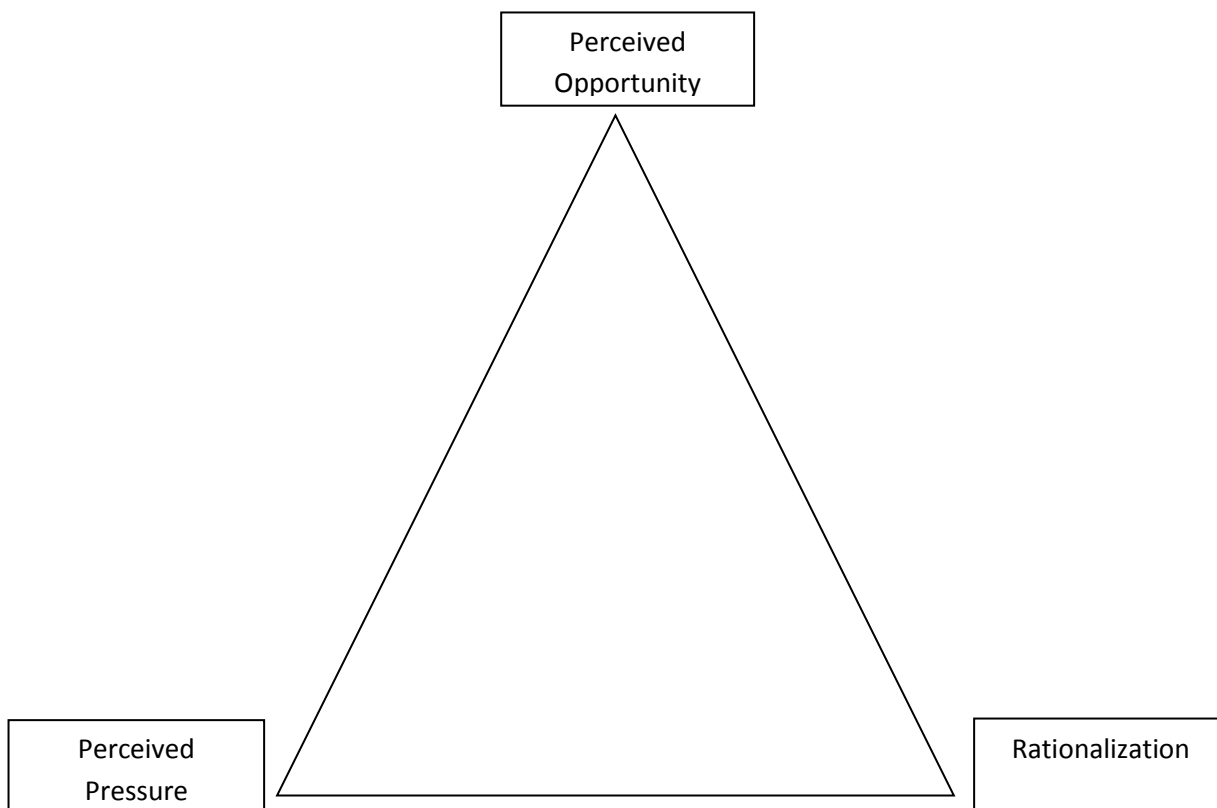
Figure 2.3. Fraud Triangle (Rezaee & Riley, 2010, p.90)

2.6.1. Perceived Pressure

Fraud does not start with dishonesty, but it commences with pressure that can take a number of forms at both the executive and employee levels (Goldman, 2010; Ramamoorti & Olsen, 2007). Research conducted by Albrechts and Romney (1986); Bell and Carcello (2000); Eining, Jones and Loebbecke (1997); and Wells (2005), suggests that excessive pressure on an organisation's executives to meet targets set by the board of directors might evoke an environment favourable for fraud (Murdock, 2008; Murcia & Borba, 2007). Brewer (2008) implies that fraud often starts simply as good

people coming together to create business solutions to satisfy some demand which is caused by external forces and, as the pressure increases, so does the creativity or innovation of the solutions (Brewer, 2008). This pressure is the first step that results in the individual considering fraud seriously (Rezaee & Riley, 2010). Albrecht et al. (2009, p.38) cites the example of Abraham Lincoln, the U.S. president most known for his honesty, turning down a substantial bribe and throwing the briber out of his office. When asked why he had acted so angrily and thrown the man out of his office, Abraham Lincoln replied "Every man has his price, and he was getting close to mine".

Pressure can be divided into four main categories: 1) financial pressure, 2) vices, 3) work-related pressures and 4) other pressures (Albrecht et al., 2009). Financial pressures may include a child's tuition payments, housing expenses or unexpected medical bills (Goldman, 2010; Murdock, 2008). Additional examples of pressures are listed by Crawford and Weirich (2011): 1) Financial stability or profitability is threatened by economic downturn, industry or by the organisation's operating conditions; 2) excessive pressure exists for management to meet the requirements or expectations of third parties; 3) available information indicates that management or the board of directors' personal financial situation is threatened by the organisation's financial performance; 4) there is excessive pressure on management to meet financial targets set by the board of directors or management, including sales or profitability incentive goals. What is evident according to Duffield and Grabosky (2001), is that explanation for fraud based on financial pressures feature in almost every fraudulent activity. But what the above authors allude to is the fact that financial strain is a subjective aspect, as even individuals of above average affluence may feel economically deprived in comparison to what they perceive to be their relevant standard. Therefore individuals may be motivated to commit fraud by the desire to possess what they cannot afford. Inherent in this is an element of ego in which comparison with others who are better off and a desire to match that standard in terms of lifestyle and material possessions are present (Duffield & Grabosky, 2001).

Closely linked to financial pressures are motivations derived from a lack of personal discipline or weaknesses such as a gambling habit, drug addiction, extramarital relationships or the need to sustain a lavish lifestyle (Albrecht et al., 2009; Murdock, 2008), while for Jones (2011), the primary motivation for committing fraud arises from greed, gambling and lifestyle.

The third category of pressure is work-related pressure, and this occurs when individuals commit fraud to get even with their employer or others. Aspects such as getting little recognition for job performance, fear of losing one's job, being passed over for a promotion or feeling underpaid, have motivated many frauds (Albrecht et al., 2009).

Fraud can also be motivated by the fourth category, namely other pressures, such as a spouse who insists on an improved lifestyle or a challenge to beat the system (Albrecht et al., 2009). It is evident that non-financial motivators are powerful motivators and may be the dominant reason for committing management fraud (Murdock, 2008). An important motivator may be maintaining the esteem of one's peers and include political and social pressures, in which people feel they cannot appear to fail due to their status or reputation (Murdock, 2008).

2.6.2. Perceived Opportunity

The second element of the Fraud Triangle is the perceived opportunity to commit fraud, conceal it, or avoid being punished (Albrecht et al., 2009). Without opportunity, no fraud can exist (Rezaee & Riley, 2010). Crawford and Weirich (2011) list the following risk factors for opportunity to occur: 1) the nature of the industry or the entity's operation provides opportunities to engage in fraudulent financial reporting; 2) there is not

sufficient monitoring of management; 3) there is a sophisticated or unstable organisational structure and; 4) internal control aspects are deficient.

Silverstone and Sheetz (2007) emphasise that the situation in which the potential fraudster finds him- or herself plays a major role in determining whether a crime will be committed as the organisational culture lived daily in the workplace can often create enormous pressure to commit criminal acts. Murdock (2008) states that individuals often discover an opportunity to commit fraud when internal controls are lacking or weak. This is one of the greatest challenges, as high level managers can override the system of internal controls. Operationally this implies that managers can override the control environment to effect financial reporting fraud. Managerial override can occur in three major ways (Rezaee & Riley, 2010):

1. the improper use of journal entries;
2. the misuse of managerial discretion when it comes to accounting choices, amongst others, important estimates for bad debts, warranties, end of period expenses;
3. miss-accounting for unusual, one-time significant transactions.

A major challenge in the detection of management fraud is the collusiveness nature of financial reporting of fraud as people working together to conceal fraud makes it difficult to detect (Rezaee & Riley, 2010).

2.6.3. Rationalisation of Fraud

Once opportunity and need are present, the individual must rationalize the embezzlement (Pedneault, 2009). Rationalisation can be viewed as the ability to convince oneself that something that most individuals view as dishonest can be justified because there is a pressing need to take urgent action over and above the desire to

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remain honest (Pickett, 2011). Rationalisation can be seen as an attitude, character or set of ethical values that allows one or more individuals to knowingly and intentionally commit a dishonest act, or a situation in which individuals are able to rationalize committing a dishonest act (Murdock, 2008). Individuals sometimes develop a rationale for fraudulent activities for reasons that include, amongst others, the fact that they were overlooked for a promotion that they believe they deserved and that stealing from the organisation will set things right (Murdock, 2008). Rationalizations for fraud may include the attitude of:

1. "Nobody is getting hurt".
2. "It's in the best interest of shareholders and the company".
3. "They would understand if they knew the situation".
4. "It's for a good purpose".
5. "Everyone is doing it".
6. "The company does not care about me, so I don't care about it".
7. "As soon as things pick up, I will pay it all back".
8. "If they cannot be bothered to protect their resources, what do they expect?".
9. "If anyone asks I'll just say it was an error and whatever happens I will not go to jail, which is the main thing".
10. "The top people get so much and I get so little – that's unfair".
11. "Look who's got the power now!" (Pickett, 2011, p.151; Rezaee & Riley, 2010, pp.90-91).

Goldman (2010) states that the most common psychological rationalisation for committing fraud by top management is doing "whatever it takes".

According to Jones (2011) and Tickner (2010), individuals motive for committing fraud is always greed, wanting something to which they are not entitled. Although they may intellectualise the reason for committing the fraud, it is this justification and

rationalisation, particularly amongst managers who commit fraud against their own organisations, that allows an otherwise apparently moral and socially responsible individual to continue his/her fraud. Duffield and Grabosky (2001) differ from the above author's viewpoint by stating that, although greed and dishonesty would appear as a psychological explanation for fraud, that this is an overly simplistic explanation for fraud. The above authors base their stand on the fact that there are many individuals in society who are aggressively materialistic but generally law-abiding and not all dishonest people commit fraud (Duffield & Grabosky, 2001). Hollinger and Clark (1983) concluded that employees steal primarily as a result of poor workplace conditions. Employees find it easier to rationalise fraudulent behaviour as compensation for putting up with unfavourable working conditions by rationalising that "they owe me". Hollinger and Clark's (1983) research posited the following relationships:

1. There is little correlation between personal income levels and fraud. Income does not appear to be a predictor of theft, as employees at all income levels commit fraud.
2. There is a positive relationship between job dissatisfaction and employee deviance, including fraud.
3. There is a negative correlation between controls and incidences of employee deviance.

Cressey's core observation is that with a non-shareable financial test, a perceived opportunity to steal with little concern of detection and a morally justifiable excuse, an otherwise upstanding and professional employee may commit fraud (Dorminey et al., 2012).

2.6.4. Limitations of the Fraud Triangle

What is palpable from the model discussed above is that fraud behaviour is multi-factorial and although the Fraud Triangle provides a useful conceptual framework to

understand the root causes of fraud, it is important to note that human beings commit fraud (Albrecht et al., 2009; Dorminey et al., 2012; Ramamoorti et al., 2009). While it is generally accepted within fraud prevention circles that a certain element of our society, and hence the population of any given organisation is inherently honest, for some individuals, being successful is more important than being honest (Silverstone & Davia, 2005). If these individuals were to rank the personal characteristics they value most in their lives, being successful would rank higher than having integrity (Albrecht et al., 2009). Conversely certain individuals are inherently dishonest and little will deter them from deceit. The rest may commit acts of dishonesty if the need and opportunity coexist (Albrecht et al., 2009). An honest person with a high degree of personal integrity may therefore be inclined to commit fraud if exposed to situational pressures and lack of strong controls (Silverstone & Davia, 2005). Individuals with high integrity and low opportunity may need significant pressure to be dishonest (Albrecht et al., 2009).

Albrecht et al. (2009); Murphy et al. (2011) and Ramamoorti (2008) argue that more psychology and behavioural sciences need to be brought into the fight against fraud, as all components of the Fraud Triangle are essentially behavioural constructs, as perceived pressure and personal incentives drive human behaviour and the need to rationalize wrongdoing as being somehow defensible, is psychologically rooted (Ramamoorti & Olsen, 2007). The assessment of the opportunity to commit fraud, including the likelihood of being caught, is a subjective, behavioural assessment and therefore, in order to understand the root causes of fraud, psychological answers and explanations rather than logical ones should be sought (Ramamoorti & Olsen, 2007).

With fraudulent behaviour being viewed as a premeditated act which is not impulsive, the importance and power of sound ethical personal values are emphasised, with Fraedrich, Ferrell and Ferrell (2011) providing solid evidence that shows that individuals use different moral philosophies depending on whether they are making a personal decision away from the work environment or a work related decision on the job. The role

of ethics in fraudulent decision making is further promoted by Cremer, Tenbrunsel and van Dijke (2010) and Dorminey et al. (2012) who argue that researchers in business ethics need to rely on insights from psychology, as ethical decision making plays a pivotal role in an individual's decision to commit fraud (Albrecht et al., 2009; Andreoli & Lefkowitz, 2009). The next section aims to address the above arguments and focuses on the behavioural aspect of the Fraud Triangle by examining the ethical aspects that affect an individual's decision to commit fraud.

2.7.   FACTORS AFFECTING AN INDIVIDUALS'S DECISION TO COMMIT FRAUD

The word "Ethics" originated from the Greek word *ethos*, which means character or custom and covers the personal choice element and the inclusion of a social or cultural influence (Matthewman, Rose & Hetherington, 2009). Socrates believed that people could be taught to behave ethically, yet ethical behaviour is difficult to quantify since the continuum of ethics is constantly changing and evolving (Matthewman et al., 2009). In addition, human behaviour and motivation according to Ostas (2007), is varied and complex and this intricacy of human behaviour and motivation may suggest that there is more than one reason why a person may commit fraud. In some instances an individual may appear self-interested, ruthless, calculating and conniving, while in other contexts the same individual may demonstrate total selfless behaviour, sacrificing self gain for the good of others (Ostas, 2007). This implies that morality does not exist in a vacuum and requires a social context that gives the universal principles practical meaning. Hence ethics represent a shared morality for different people with different moralities (Thyssen, 2009). The issue is further compounded by the perception of what constitutes ethical behaviour as opposed unethical behaviour in an organisation. This perception differs from one individual to another (Quick & Nelson, 2009), with Constantin (2010) highlighting the role that multiculturalism may play in ethical decision making. This author states that not all individuals are aware that they have to comply with an organisation's value system, which might be different from the one they are used to.

The situation is further complicated by the fact that unethical behaviour has never been clearly defined and in recent years the line between right and wrong has become blurred (Robbins & Judge, 2010). Quick and Nelson (2009) further imply that one of the most challenging issues faced by management is aligning the ideal of ethical behaviour with the reality of everyday business practices. Millman (2006) states that the real challenge for organisations in managing ethics is not the black and white decision of obeying or disobeying the law, but the grey area of whether managers made intelligent, rational and ethical decisions.

Figure 2.4. identifies certain factors influencing moral values, ethics, decisions and behaviour. As viewed in figure 2.4., moral values provide the basis for the standards of behaviour and ethical standards influence both decisions and behaviour in the workplace.

Moral Values	Ethics	Decision	Behaviour
(fundamental beliefs about what is good or bad, right or wrong)	(standards of conduct in keeping with one's moral values)	(plan for behaving in an ethical fashion)	(action taken following from the decision made)

| Religious background, beliefs, training. Level of cognitive moral development | Clearly articulated ethical standards. Training in recognising and applying ethical standards. | Organisational and group norms; Culture of organisation; Observations of leader's behaviour; Work attitudes and motives; External stressors | |

Figure 2.4. Moral values versus ethics (Greenberg, 2010, p.46)

The term ethics has many nuances and is explained by a number of authors, with the majority of them emphasizing "right" and "wrong", "good" or "bad" and "judgments" on human behaviour or the standards that govern behaviour (Chryssides & Kaler ,1993; Fraedrich, Ferrell & Ferrell, 2011; Sindane (1999).

Ortmeir and Meese (2010) view ethics as the study of principles of good conduct and systems of moral values. Hence ethics can be seen as referring to the standards of conduct that direct individuals' decisions and behaviour (Greenberg, 2010). Johnson and Ridley (2008) emphasise the context within which ethical decisions are made and this is supported by Velasquez's (2006, p.10) definition of ethics that emphasises the role of society: "The discipline that examines one's moral standards or the moral standards of a society".

According to Constantin (2010) the term *business ethics* is generally used to describe the actions of individuals within an organisation, as well as the organisation as a whole. Business ethics according to Constantin (2010), consists of written and unwritten codes of principles and values that govern decisions and actions within an organisation. As seen above, values and judgments play a critical role in ethical decision making (Fraedrich, Ferrel & Ferrel, 2011; Mondy & Noe, 1996).
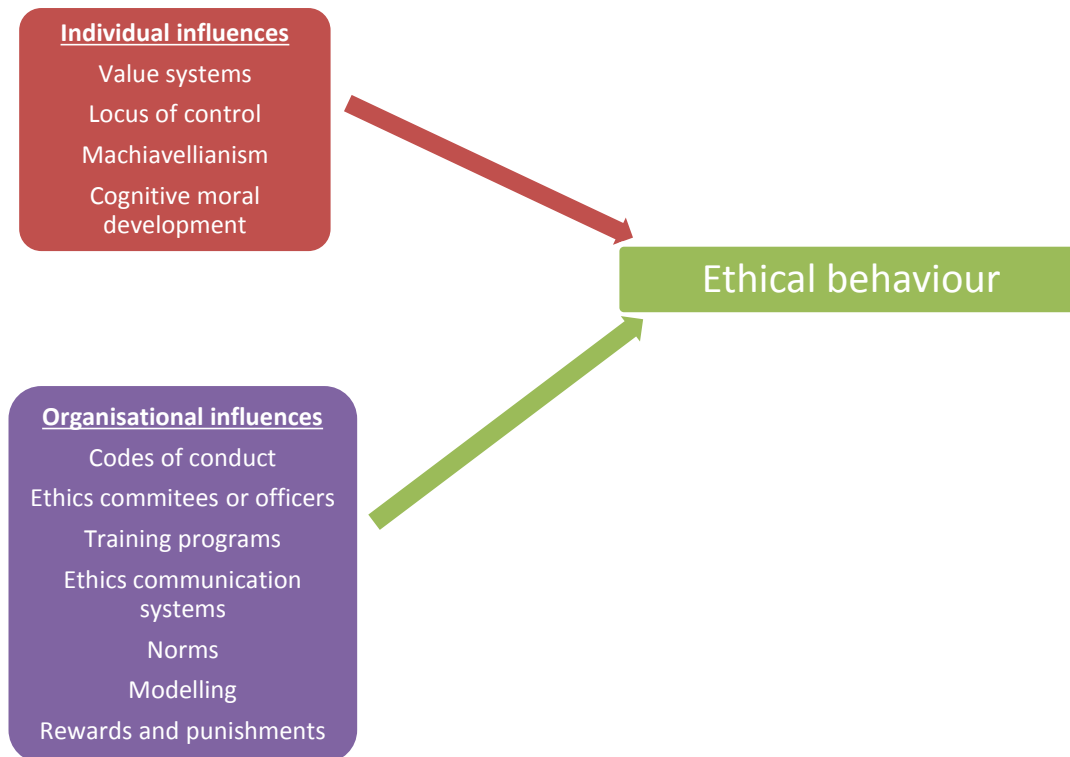
Figure 2.5. Individual/Organisational model of ethical behaviour (Quick & Nelson, 2009. p.136)

As viewed in Figure 2.5., the two major categories affecting ethical behaviour in an organisation are individual characteristics and organisational factors (Biron, 2010; Greenberg, 2010; Quick & Nelson, 2009). According to Kaptein (2011), scholars initially focussed primarily on the personal characteristics of individual transgressors, the so-called "bad apples approach", while more recently the organisational context, namely the "bad barrels approach", has started to receive research attention.

Subsequently, research on organisational ethics has followed two different approaches to examining ethics in organisations (Ambrose, Arnaud & Schminke, 2007). The first focuses on an individual's ethical orientations, and considers issues such as an

individual's level of cognitive development, individual ethical frameworks, and the effects of these on individuals' behaviours and attitudes (Ambrose et al., 2007). The second leg focuses on organisational attributes that affect moral behaviour and attitudes of employees at work. What is evident from the literature is that both organisational and individual factors play a role in ethical workplace behaviour (Fagbohungbe, Akinbode, & Ayodeji, 2012).

2.7.1. Individual Behavioural Characteristics Affecting Ethical Behaviour

Individuals differ in terms of their adherence to ethical considerations and, contrary to people's notion that computers stole their money, fraud is carried out by people (Silverstone & Davia, 2005). Appelbaum and Shapiro (2006) provide evidence that three out of four employees have reported having stolen at least once from their respective organisations. Computers and other technology may assist the fraudster, but it is still the result of human input and motivation (Silverstone & Davia, 2005).

Individual behavioural characteristics that affect ethical behaviour include, inter alia: individual decision making, cognitive moral development, values, locus of control, Machiavellianism, pecuniary self-interest and self-restraint (Ostas, 2007; Quick & Nelson, 2009). In addition, Moore, Detert, Trevino, Baker and Mayer (2012) list a number of previous researchers who have investigated various individual level antecedents in unethical behaviour: ethical leadership (Brown & Trevino), ethical climate (Mayer, Kuenzi & Greenbaum), codes of conduct (Weaver & Trevino), Machiavellianism (Christies & Geis; Schultz; Siegel), moral identity (Aquino & Reed; McFerran, Aquino & Duffy), cognitive moral development (Ambrose, Arnaud & Schminke; Greenberg; Kohlberg), moral philosophies (Bird; Forsyth), empathy (Davis; Gino & Pierce) and moral affect (Eisenberg; Paternoster & Simpson; Tangney).

An individual's decision to behave ethically is also influenced by a number of additional individual and situational factors that include, amongst others, background, personality, decision history, managerial philosophy and reinforcement (Stead, Worrell & Stead, 1990). And according to Bass, Barnett and Brown (1999), there are a number of models to explain ethical decision making with Trevino's (1986) person-situation interactionist model emphasising the importance of the interaction between individuals and situations.

However, one of the most well-known and respected conceptual models of ethical behaviour is proposed by Stead and Worrell (1990). This model demonstrates the relationships among certain of the factors discussed above and can be used to demonstrate why employees behave either ethically or unethically in organisations (See Figure 2.5).

ETHICAL PHILOSOPHY

Utilitarianism
Rights
Justice

PAST REINFORCEMENT OF ETHICAL DECISIONS

INDIVIDUAL FACTORS

Personality
Ego Strength
Machiavellianism
Locus of Control

Socialisation
Sex Roles
Religion
Age
Work Experience
Significant others

ETHICAL DECISION IDEOLOGY

Situationist
Subjectivist
Absolutist
Exceptionist

ETHICAL DECISION HISTORY

ETHICAL BEHAVIOUR IN ORGANISATIONS

EXTERNAL FORCES

Economic Conditions
Scarce Resources
Competition
Multiple Stakeholders
Political & Social Institutions

ORGANISATIONAL FACTORS

Managerial philosophy
Managerial Behaviour
Reinforcement System
Characteristic of the Job

Figure 2.6. A model of ethical behaviour in organisations (Stead & Worrel, 1990, p.237)

For purposes of this study, the next section will integrate the individual personality factors (ego strength; Machiavellianism and locus of control) as viewed in figure 2.6. into the combined individual behavioural factors as stated by Fraedrich, Ferrell and Ferrell (2011); Ostas (2007); Shacklock, Manning and Hort (2011) and Quick and Nelson (2009): 1) ego strength; 2) individual decision making; 3) cognitive moral development; 4) values; 5) locus of control; 6) Machiavellianism; and 7) pecuniary self-interest.

2.7.1.1. Ego Strength

Freud divided personality structures into three components: the id, the ego and the superego and viewed a person's behaviour as the outcome of interaction among these three components (Weiten, 2013). As a construct ego, strength is related to strength of conviction or self-regulating skills and refers to an individual's ability to engage in self-directed activity and to manage tense situations (Stead, Worrell & Stead, 1990; Trevino, 1986). Individuals high on a measure of ego strength are expected to resist impulses and follow their convictions more than individuals with low ego strength (Trevino, 1986). Therefore individuals with high ego strength are expected to be more consistent in the moral/cognition action relationship (Trevino, 1986).

A key lesson within the context of the ominous attitudinal changes that took place in the boardrooms in the 1990s and 2000s, is that all too often common ego-driven psychology of the ends justifying the means drove a number of executives to be investigated and charged with serious financial crimes (Goldman, 2010). Inherent in this is an element of ego in which comparison with others who are better off and a desire to match that standard in terms of lifestyle and material possessions is noticeable (Duffield & Grabosky, 2001).

2.7.1.2. Individual decision making

Social and psychological factors have an important effect on decisions and the fact that decisions are based on feelings, emotions and mental sets as well as on rationality, imply that managers could make highly questionable even unethical decisions (Fox, 2006). Rational choice theory is one of the most dominant theoretical paradigms in political science and decision making and can be viewed as a process of cognition and calculation in which individuals pursue desired goals, weigh consequences and select among options (Shover & Hochstetler, 2006). This implies that the structural conditions

and generative worlds that are at the bottom of, readiness to choose crime, are important primarily since they shape offenders' evaluation of potential costs and benefits (Shover & Hochstetler, 2006). Normative confusion and ambiguity, for example, is a background factor that has been linked theoretically to increased likelihood of misconduct by organisational employees and management (Shover & Hochstetler, 2006).

From figure 2.6. it is evident that the ethical philosophy that governs the rules and principles used to justify these ethical decisions range from those that justify self-serving decisions to those that require careful consideration of other individuals' civil, human and constitutional rights (Cunningham, 2011). While the doctrine and rules of decision making are strongly influenced by the requisite to provide an ethical justification for an individual's decisions and behaviours, individuals use three different criteria in making ethical decisions, with each criterion having its advantage and liabilities (Cunningham, 2011; Robbins & Judge, 2011; Robbins, Judge, Odendaal and Roodt, 2009). The first approach which tends to dominate business decision making entails decisions being based solely on their outcomes or consequences and the goal of this utilitarianism approach is to provide the greatest good for the greatest number (Robbins et al., 2009). The second ethical criterion is to base decisions consistent with fundamental privileges or rights as set forth in legal documents, such as the Bill of Rights, government legislation and the constitution of the nation (Robbins et al., 2009). The third criterion is to focus on justice and requires the individual to impose and enforce rules fairly and impartially so that there is an equitable distribution of costs and benefits (Robbins et al., 2009).

While decision making for managers may pivot around decisions involving direct personal gain, indirect personal gain or simple personal preference, organisational crises such as conditions that may threaten the viability of the organisation or poor

management may also result in unethical decision making (Cunningham, 2011; Moorhead, 2006).

2.7.1.3. Cognitive moral development

Cognitive moral development is a key factor in determining an individual's capacity to engage in moral decision making (Greenberg, 2010). Kohlberg's theory of cognitive moral development was introduced three decades ago and, according to Velasquez (2006) is one of the leading theories in cognitive moral development. Kohlberg developed his theory originally in the field of developmental psychology and based his justice based model on the work of the child psychologist Piaget (Fisher & Lovell, 2009; Kerler III & Killough, 2008). Kohlberg's theory addresses how cognitive processes of moral decision making become more multifarious and highly developed with development (Trevino, 1986). The foundation of moral reasoning research is the question as to how and why individuals make decisions when faced by an ethical dilemma (Kerler III & Killough, 2008).

Kohlberg stated that there are six sequential stages in the development of a person's ability to deal with moral cognitive issues and that individuals' progress one sequence at a time (Elm & Weber, 1994; Kerler III & Killough, 2008; Velasquez, 2006). According to Kohlberg, moral development evolves throughout childhood and adolescence in predictable stages (Forte, 2004).

Kohlberg grouped the stages of moral development into three levels, with each level containing two stages. The second stage is the more advanced and organized form of the general perspective of each level (Velasquez, 2006). The basic premise is that individuals pass through an unchanging and hierarchical sequence of three stages in the development of their ethical cognitive ability – the pre-conventional, the conventional

and the post-conventional (Velasquez, 2006). The critical perspective underlying this model is the reasons given why certain actions are perceived as morally just or preferred (Elm & Weber, 1994).

The pre-conventional level incorporates Stage one (punishment and obedience orientation) and Stage two (instrumental and relative orientation) (Velasquez, 2006). Individuals at level one have not yet developed the capacity to assume the perspective of others (Greenberg, 2010). At this level the individual is concerned with his/her own immediate interests and with external rewards and punishments (Fraedrich et al., 2011). Stage one comprises the stage of punishment and obedience. An individual in this stage defines right and wrong as literal obedience to rules and authority. Right and wrong are not associated with any higher order or philosophy but with an individual who is in a power position (Fraedrich et al., 2011). Stage two is the stage of individual instrumental purpose and exchange. In stage two an individual defines right as that which serves his or her own needs. During this stage an individual evaluates behaviour on the basis of fairness to him or her and no longer makes moral decisions solely on the basis of specific rules or authority figures (Fraedrich et al., 2011). The second level is referred to as the conventional level of moral reasoning. Individuals who fall within this domain are strongly governed by doing what is expected from them. These individuals carefully examine the social environment for indications of ethical behaviour and then act accordingly. Individuals within this level obey the law not only to avoid repercussions for not doing so, but because they realize that it is the right thing to do as it promotes the safety and welfare of society (Fraedrich et al., 2011). Stage 3 can be referred as the stage of mutual interpersonal expectations, relationships and conformity. In this stage an individual considers the well-being of others, although ethical motivation is still derived from obedience to the rules (Fraedrich et al., 2011). In stage 4 an individual determines what is right and wrong by considering his or her duty to society and not just to specific persons. This stage can be referred to as the stage of social systems and conscience maintenance. Duty, respect for authority and maintaining the social order becomes the focal point. The second last is referred to as the stage of prior rights,

social contract, or utility. An individual in this stage is concerned with upholding the basic rights, values and legal contracts of society. In this stage a sense of obligation or commitment is experienced by individuals, and individuals may base their decisions on a rational calculation of overall utilities. The last stage comprises a belief in that right is determined by universal ethical principles that everyone should follow. In this stage an individual believes that there are inalienable rights, which are universal in nature and consequence. These rights, laws and social agreements rest on the premise of universality and therefore they are valid and irrespective of a particular society's law or customs (Fraedrich et al., 2011). The final level as identified by Kohlberg's theory, is the post conventional level. At this level moral judgment is based not only on interpersonal and societal obligations, but also in terms of complex philosophical principles of justice, duty and rights (Greenberg, 2010). At this level individuals make ethical decisions regardless of negative external pressures (Fraedrich et al., 2011). According to Kohlberg, very few individuals reach this level, but individuals who reach this level base their behaviour on what they are convinced is correct, even if others do not agree (Forte, 2004; Greenberg, 2010).
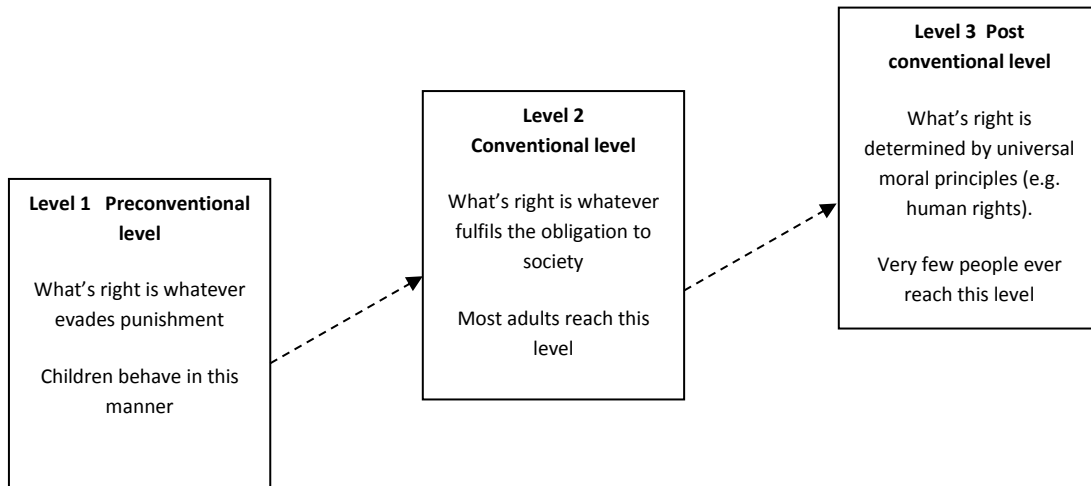
Figure 2.7. Kohlberg's theory of cognitive moral development (Greenberg, 2010, p.51)

According to Fraedrich et al. (2011), Kohlberg's theory implies that individuals change their decision making priorities after their formative years as a result of education, experience and time. Andreoli and Lefkowitz (2009) are of the opinion that that one of the most considered determinants of an individual's ethical behaviour is the degree or level of moral development. Research conducted by Blasi and Thoma as cited in (Andreoli & Lefkowitz, 2009), has demonstrated a significant relationship between individuals' scores on measures of moral judgement and behavioural outcomes that include, amongst others, honesty. A comprehensive review of published research studies from 1996 – 2003 by O-Fallon and Butterfield found measures of levels of ethical judgements to be related to outcomes such as ethical behaviour and intentions.

A limitation of Kohlberg's model is that tests of moral judgement are limited to cognitions and not to behaviour. Hence it tests how individuals think about moral dilemmas and not behaviour (Trevino, 1986). Research as reported by Trevino (1986), indicates that there is a moderate relationship between thought and action. Thus moral judgement is a necessary but insufficient condition for moral behaviour such as altruism, honesty and resistance to temptation (Trevino, 1986).

2.7.1.4. Values

One important basis of individual differences in ethical behaviour is values (Quick & Nelson, 2009). According to Meglino and Ravlin as cited in Grojean, Resick, Dickson and Smith (2004), values have an important influence on organisational behaviour, including organisational ethics. Individuals utilise values to assess their own behaviour and that of other individuals, and certain values are only maintained as they fulfil more fundamental values (Thyssen, 2009). Values are used interchangeably to refer to beliefs, preferences, interests, norms, principles, needs, intentions, codes, criteria and ideology (Schreuder & Coetzee, 2011).

Robbins and Judge (2011); Schreuder and Coetzee (2011), and Quick and Nelson (2009) view values as an enduring belief that a specific mode of conduct or end state of existence is personally or socially preferred to an opposite mode of conduct or end state of existence. Values influence individual behaviour as individuals are motivated to act in a manner that is consistent with those aspects that are valued (Grojean et al., 2004).

According to Grojean et al. (2004), values are cognitive structures that support the interest of some elements of the social environment. Secondly, values motivate behaviour by direction and emotional intensity to action. In addition, values are also used to judge and justify action, and finally values are acquired through socialisation. Rokeach distinguished between two types of values: instrumental and terminal: the prior value refers to a desirable end state and it is the goal which an individual would like to achieve during his/her lifetime, while an instrumental value can be viewed as a means to achieve the terminal values, and hence refers to a preferred mode of behaviour (Robbins, 2001).

Grojean et al. (2004) states that values can operate at multiple levels to influence organisational behaviour: societal, organisational and personal. The above authors make the recommendation that the values of the organisation, its leaders and its members play an important role in shaping the organisation's climate regarding ethics. Within the business organisations Rossouw and van Vuuren (2010) identify three different values: strategic, work and ethical values. Strategic values indicate the direction in which the organisation wishes to move and hence can be viewed as the shared conviction of the organisation about its desired objectives. Work values can be viewed as the priorities that organisational members should adhere to in their jobs and may include aspects such as punctuality, work standards and innovation. The last value mentioned by Rossouw and van Vuuren (2010) ensures that stakeholders inside and outside the organisation get along well with each other, and is referred to as ethical values.

An understanding that an individual's values differ but tend to reflect societal values of that period in which they entered the workforce may assist in explaining and predicting behaviour (Robbins, 2001). Robbins (2001) and Schreuder and Coetzee (2011) list the following four dominant work values in today's workplace: protestant work ethic; existential; pragmatic; generation X. generation Y can be added to the list. These values are important as they affect how individuals behave on their jobs in terms of what is right and wrong (Quick & Nelson, 2009). The protestant work ethic entered the workforce in the early 1940s and employees were characterized as hard workers, conservative and loyal to the organisation (Schreuder & Coetzee, 2011). When faced with an ethical decision, they based their decision on what was best for their organisation and work was viewed as a central part of their lives. This approach stated that people should work hard as those who worked hard were more likely to find a place in heaven (Quick & Nelson, 2009). Over time the religious meaning of the protestant work ethic declined and the existential stage entered the workforce during the 1960s through to the 1970s (Quick & Nelson, 2009). This workforce brought with it a large measure of the so-called "hippie ethic" and they were concerned with the quality of life

(Quick & Nelson, 2009. Their desire for autonomy directed their loyalty towards themselves rather than towards the organisation that employed them. They were generally non-conforming and wanted autonomy. The third dominant work value was called the pragmatic stage and these individuals entered the workforce between 1970s and 1980s. They emphasized achievement, success and ambition. Born towards the end of the so-called baby boom period these workers were pragmatists who believed that the end can justify the means. Values such as sense of accomplishment and social recognition ranked high among these individuals. Another category generation X, values flexibility, a balanced lifestyle and the achievement of job satisfaction. This generation seems less likely to make personal sacrifices for the sake of their employer than previous generations were (Robbins, 2001). Today the millennials enter the world of work with the belief that they are charged with cleaning up the mess left behind by the two preceding generations (Shepard, 2004). Millennials are confident, highly team orientated and conventional. They tend to be strong achievers if they are properly motivated and are morals-driven, so they do not understand the need for outside authority in their lives (Shepard, 2004).

2.7.1.5. Locus of control

Rotter's locus of control personality construct evolved from Carl Jung's earlier work and may explain ethical behaviour (Forte, 2004; Trevino, 1986). Locus of control is a personality construct that measures the extent to which individuals believe they are responsible for the events in their lives (Robbins, Odendaal & Roodt, 2001). According to Quick and Nelson (2009), locus of control refers to an individual's generalized belief about internal versus external control. Individuals who believe they control what happens to them are said to have a internal locus of control, while individuals who believe that circumstances or other people control their fate have an external locus of control (Forte, 2004; Trevino, 1986). Internals are more prone to take responsibility for the consequences of their behaviour, and externals are more likely to blame external factors for their ethical or unethical behaviour (Trevino, 1986). Research has also

shown that internals make more ethical decisions than do externals as internals are more resistant to social pressure and less willing to hurt another person (Quick & Nelson, 2009).

2.7.1.6. Machiavellianism

The personality characteristic of Machiavellianism is named after Niccolò Machiavelli, who stated in various influential works that it was necessary for leaders to maintain a righteous public image, while at the same time being ready to deceive others and act in a ruthless manner to obtain and sustain a position of power (Fraedrich et al., 2011; Robbins & Judge, 2011). Machiavelli is well known for the concept that it is better for a leader to be feared than loved (Fraedrich et al., 2011). An individual high in Machiavellianism is pragmatic, maintains emotional distance and believes that the end can justify the means (Robbins & Judge, 2011). The Machiavellianism construct is based on the above statement. Individuals who score high on Machiavellianism are believed to be emotionally distant from others, to be prone to manipulate others and to have a cynical and unflattering viewpoint of others. A conventional Machiavellian viewpoint would be that rising to the top of the organisation warrants manipulation, blaming and attacking rivals, controlling and manipulating information, image building, creating obligations and indebtness among followers and gaining control over scarce resources. From this it is evident that adhering to ethics in the organisation means yielding to these power tactics and resources (Quick & Nelson, 2009).

2.7.1.7. Power

According to Albrecht et al. (2009), Max Weber introduced the concept of power in 1947 and described it as the probability that an individual can perform according to his/her own will despite resistance. Power is therefore the ability to influence others, and can be viewed as a dynamic that forms an integral reality for all interpersonal relationships and

occurs in interaction between an agent and a target (Cunningham, 2011; Dunn, 2004; Quick and Nelson, 2009). Power plays a fundamental role in the decision-making process and exists wherever there is a relationship between two or more people and normally accrues to the person who can control the decision-making process (Dunn, 2004; Schreuder & Coetzee, 2011). The agent can be viewed as the person using the power and the target is the recipient of the attempt to use power (Cunningham, 2011). Matthewman et al. (2009) emphasises that power is not exclusive to individuals and occurs in groups and subunits. The exercising of this power is regulated or constrained by the interrelationship nature of various entities in an organisation (Cunningham, 2011). An important resource that creates dependency on the part of other groups, creates power for individuals, hence managers and the Board of Directors are often the most powerful groups in organisations as they possess money in the form of budgets and the authority to determine how these budgets should be allocated (Dunn, 2004; Schreuder & Coetzee, 2011).

French and Raven classified power into five separate variables, each stemming from various aspects of the relationship, between the actor, and his target of influence (Matthewman et al., 2009). Table 2.8 is adapted from Albrecht et al. (2009); Moorhead (2006) and Quick and Nelson (2009) and distinguishes five types of power as identified by French and Raven and provides guidelines for the ethical use of power.

Table 2.3. Guidelines for the ethical use of power (Albrecht et al., 2009, p.53).

Form of Power	Description of Power	Guidelines for Use
Reward power	Ability of fraud perpetrator to convince a potential victim that he/she will receive a certain benefit through participation in the fraudulent scheme.	Verify compliance; Make feasible, reasonable requests; Make only ethical requests; Offer rewards desired by subordinates; Offer only credible rewards.
Coercive power	Is the ability of the fraud perpetrator to make an individual perceive punishment if he/she does not participate in the fraud	Inform subordinates of rules and penalties; Warn before punishing; Administer punishment consistently and uniformly; Understand the situation before acting; Maintain credibility; Fit punishment to the infraction; Punish in private.
Expert power	Is the ability of the fraudster to influence another person because of his/her knowledge and/or expertise. In the case of Enron, management claimed to have expert knowledge regarding complicated business models and arrangement. This resulted in individuals who would have otherwise refused to participate in the fraudulent	Maintain credibility; Act confidently and decisively; Keep informed; Recognise employee concerns; Avoid threatening sub-ordinates self-esteem.

	scheme based on personal ethical standards to participate in the scheme, based on the fact that they convinced themselves that other individuals knew more about the complex transactions than they did and that knowledgeable individuals must understand what they are doing	
Legitimate power	The ability of the fraudster to convince a potential perpetrator that he/she has power over him/her	Be cordial and polite; Be confident; Be clear and follow up to verify understanding; Make sure request is appropriate; Explain reasons for request; Follow proper channels; Exercise power consistently; Enforce compliance; Be sensitive to subordinates' needs and feelings.
Referent power	Is the ability of the perpetrator to relate to the potential co-conspirator.	Treat subordinates fairly; Defend subordinates' interests; Be sensitive to subordinates' needs and feelings; Select subordinates similar to oneself; Engage in role modelling

It is important for all managers to learn the subtle and demanding craft of power tactics and politics if they want to survive and succeed in their roles in modern organisations (Matthewman et al., 2009). Power tactics are ways of gaining power and using it to manipulate the base of power and also to determine whether power is used in a positive or negative way (Matthewman et al., 2009). Yukl and Falbe, as reported in Matthewman et al. (2009, p.212), conducted research that examined eight power patterns of managers:

- *Consultation:* when the power holder requests his subordinates to participate in decision making and planning for change;
- *Rational persuasion:* by means of presenting facts and logical arguments the power holder asserts his influence over subordinates;
- *Inspirational appeals:* the tactic revolves around appealing to individuals' values and ideals, so that they follow the leader because he inspires them;
- *Ingratiation:* a good humoured leader will attempt to create a positive atmosphere in a work environment, as people are better motivated to follow orders if in a good mood;
- *Coalition:* the power holder influences subordinates by forming partnerships with them;
- *Pressure:* hassling, bullying and intimidation are some of the tools used in pressure tactics;
- *Upward appeals:* when a manager calls upon higher authority that has approved his request;
- *Exchange:* "If you do this, I'll give you that", an old trade tactic that still works well.

Albrecht et al. (2009, p.54) provides a figure that demonstrates how individuals use power to recruit others from a power based perspective. By examining the schemes that individuals use to recruit others to participate in fraud from a power based

perspective, it is possible to understand how certain type of fraud expand to involve others (Albrecht et al., 2009). Figure 2.7., which is similar to the Fraud Triangle, is interactive, implying that the more susceptible a victim is to the various types of power, the less effective the perpetrator has to be for recruitment to occur (Albrecht et al., 2009).

| Pressure |
| Conspirator | [Position A] | [Position B] | Potential Co-Conspirator |

- Perceived Reward Power
- Perceived Coercive Power
- Perceived Expert Power
- Perceived Referent Power
- Perceived Legitimate Power

Successful Collusion (Recruitment)

- Desire for Reward or Benefit
- Fear of Punishment
- Lack of Knowledge
- Lack of Obedience
- Relationship Needs
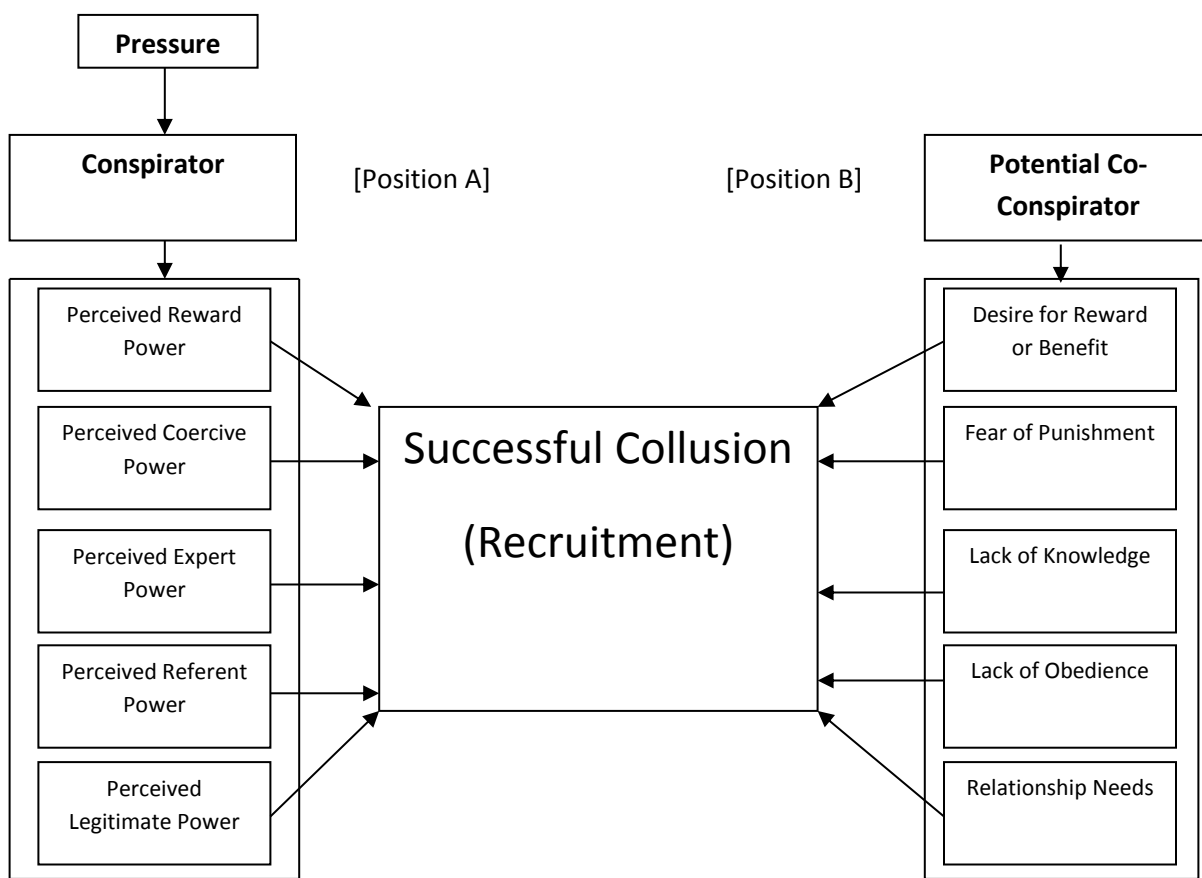
Figure 2.7. How power is used to recruit others into fraud (Albrecht et al., 2009, p. 54)

What is further evident from figure 2.7 is that an important aspect of power is that it is a function of dependency (Robbins & Judge, 2011). Or stated differently, when one possesses anything others require that one alone controls, they are dependant on one and therefore one gains power over them (Dunn, 2004). Hence when fraud is committed, the conspirator has the desire to carry out his/her own will, influence another

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individual to act and do as the perpetrator wishes, regardless of resistance (Albrecht et al., 2009).

Evident from the research conducted by Dunn (2004), is that excessive power is positively related to illegal corporate behaviour and the decision to commit management fraud is more likely to occur when there is a concentration of power in the hands of insiders. Insiders consolidate their power by controlling both the top management team by keeping key managerial positions to themselves and in this way regulate the flow of information needed to make decisions and influence the Board of Directors through the ownership interest (Dunn, 2004).

2.7.1.8. Pecuniary self-interest

Traditional economic analysis assumes that individuals, including corporate executives, are motivated by pecuniary self-interest (Ostas, 2007). Therefore, according to economic theory, corporate executives are more likely to commit fraud when it is in their pecuniary interest to do so (Ostas, 2007). The example provided by Ostas (2007) indicates that when an executive considers committing fraud, the executive calculates the potential gains from the illegal behaviour and compares those gains to the potential costs associated with the criminal and/or civil sanctions and the loss of business reputation. When the projected costs go beyond the anticipated payback the executive has no pecuniary incentive to break the law. However, if the executive concludes that fraud pays, then he/she is likely to engage in the criminal act (Ostas, 2007). A self-interested person is viewed as only concerned with profit maximisation (or its converse, loss minimisation) Cropanzano, Goldman & Folger, 2005).

Research conducted from a behavioural stance suggests that the rational calculations described above offer only an unsophisticated approximation of reality. The literature

stresses the inherent limitations of human capacity to cope with the complexity and uncertainties of life (Ostas, 2007). Research within the Cognitive Psychology domain provides evidence that individuals routinely resort to biases that prevent them from reasoning as one might expect a rational person would (Ostas, 2007). People are capable of restraining themselves and therefore it is clear that people do not always commit fraud because they believe it is in their pecuniary interest to do so (Ostas, 2007).

2.7.1.9. Self-restraint

Research studies addressing the issue of legal obedience confirm the importance of self-restraint with a number of empirical studies demonstrating that individuals will temper their drive for pecuniary gain in systematic ways (Cochran, Aleksa & Chamlin, 2006). The greater the respect for a particular law an individual has, the less likely is the crime (Ostas, 2007). Therefore, to achieve legal obedience and deter fraud, regulators need to increase the likelihood of detection and/or increase the severity of legal penalties (Ostas, 2007). According to Ostas (2007), management fraud reflects a failure of self-restraint by executives, who can restrain themselves if they choose to do so even without effective gatekeepers and increased pecuniary temptations.

Paine (1994) states that ethics is as much a personal issue as an organisational issue and rarely do the personal character flaws of an individual fully explain corporate misconduct. With Victor and Cullen (1988); Worrell, Stead, Stead and Spalding (1985), stating unequivocally that organisations are social actors responsible for the ethical or unethical behaviours of their employees and ethics is one of the most important and confounding issues facing organisations today. The above authors state that there is sufficient evidence from the literature on individual moral development to indicate the individual characteristics alone are not sufficient to explain moral and ethical behaviour (Victor & Cullen, 1988). Victor and Cullen (1988) report that even the developmental psychologist and his colleagues (Higgins, Power & Kohlberg) introduced the concepts of

a "moral atmosphere" and "just community" to consider the social context of moral and ethical behaviour. According to Victor and Cullen (1988) the above concepts of moral atmosphere is similar to ethical climate as it represents the prevailing norms of the group and not the individuals level of moral development. However according to the above authors Kohlberg's research on moral atmosphere was too narrow as it only considered the development of the collective norms and valuing of the community, with a focus and emphasis on moral education. Kohlberg did not relate methodologically or theoretically his approach to the work climate research (Victor and Cullen, 1988).

2.7.2. Organisational Characteristics Affecting Ethical Behaviour

According to Sims, as cited in Appelbaum and Shapiro (2006) and Greenberg (2010), it is understandable that individuals behave unethically in an organisation to the extent that they are supported and encouraged to do so. Organisational values have a greater influence on decisions than an individual's own values (Fraedrich et al., 2011) and therefore it is the organisation's responsibility to set clear standards of behaviour and to train employees to make the ethical decision. Just as organisations dictate behaviour in the workplace so organisations should prescribe ethical behaviour (Greenberg, 2010). Kaptein (2011) provides a model that indicates the key components of the organisation's context explaining unethical behaviour of managers and employees.

Organisational context

Formal Context

Ethics Program

Ethical Culture

Ethical Climate

Informal Context

Unethical behaviour of managers and employees
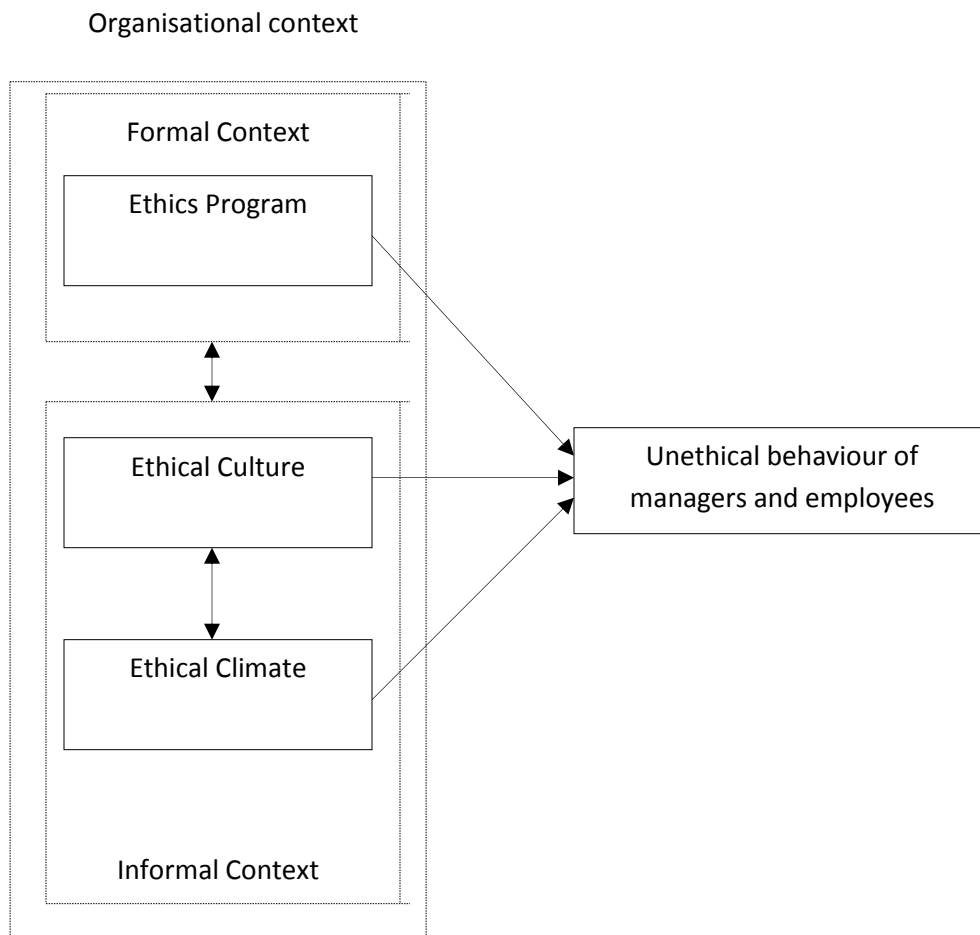
Figure 2.9. Components of the organisation's context explaining unethical behaviour of managers and employees (Kaptein, 2011, p. 845)

However, certain organisations depend on employees to be dishonest and deceitful in order to be successful (Appelbaum & Shapiro, 2006). These types of organisations are referred to as toxic and are characterised by a history of poor performance, poor decision making and high levels of employee dissatisfaction and employee stress beyond normal workload issues by (Appelbaum & Shapiro, 2006). Counter-norms refer to accepted organisational practices that are contrary to society's ethical standards and are rewarded by the organisation (Appelbaum & Shapiro, 2006). Fagbohungbe,

Akinbode and Ayodeji (2012) refer to a dishonest organisational theft climate that supports the notion that theft is acceptable. An organisational environment that is likely to cultivate a strong ethical climate will focus on performance expectations, visible recognition and promotion for employees who act ethically (Greenberg, 2010).

As stated previously, the extensive frauds committed by, amongst others, Enron, WorldCom and Tyco had an immeasurable impact on investors and the entire financial market, with the devastation still being felt in the form of lost employee pensions and damaged relationships (Uhl-Bien & Carsten, 2007). For these companies whose stock prices are not only linked directly to their performance but also to executive compensation, via incentive stock options and other financial perks directly tied to the company's stock performance, the motivations for committing fraud become quite different. According to Pedneault (2009), when discussing the motivators for committing management fraud it is vital that one examines each organisation on a case-by-case basis as conventional definitions of ethics are static and do not take into account the dynamic environment in which organisations are expected to operate. These definitions presume that there is consensus about ethical principles (Chryssides & Kaler, 1993). Changes within the organisational environment that have affected consensus concerning ethical principles include the growth of conflicting interest groups, shifts in cultural values, the demise of the Puritan ethic and the increased use of legal criteria in ethical decision making (Chryssides & Kaler, 1993). According to Ortmeier and Meese (2010), the study of ethics is further complicated since ethical standards are not based on universal agreement and a number of ethical challenges arise in culturally diverse environments that do not occur in homogenous cultures. However, research conducted by Lopez, Babin and Chung (2009), implies that ethics in the workplace can be similarly measured despite large cultural differences.

In a rapidly changing world, both the underlying purpose and the rules of the game have become unclear. What is evident is that ethics of an organisation cannot be based an

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answer book from an outside source; the values of a single stakeholder which are compelled upon other stakeholders, and a set of doctrines that are not up for discussion and cannot be changed. Ethics of an organisation must emerge through a dialogue between the various stakeholders who affect, or who are affected by, the organisation's decisions (Thyssen, 2009).

For purposes of this study, the next section will focus on organisational factors (managerial philosophy, managerial behaviour, reinforcement system and characteristics of the job) that affect ethical decision making as identified by the ethical behaviour model of Stead and Worrel (See figure 2.6.)

2.7.2.1. Managerial philosophy

The philosophy of senior management and their immediate supervisors represents a significant organisational factor influencing the ethical behaviour of employees (Stead et al., 2009). Research conducted by, amongst others, Arlow and Ulrich; Baumhart; Brenner and Molander; Carroll; Hegarty and Sims; Posner and Schimdt, clearly defend the conclusion that ethical philosophies of management have a major influence on the ethical behaviour of employees (Stead et al., 2009; Worrell et al., 1985).

However, although top management sets the ethical tone of an organisation, ethical awareness needs to be reinforced by engaging top management in social and ethical audits of the organisation and by arranging periodic seminars, which serve to maintain ethical thought processes (Forte, 2004).

2.7.2.2. Managerial Behaviour

"...fish rot from the head. Companies need to set a standard at the top, and if those at the top start acting wrongfully or unethically, the whole company knows about it" (Barrier as cited in Coetzee, 2010, p.19). Erben and Güneser (2008) agree with the above opinion and state that one of the most important organisation-specific factors that play a role in employees' perceptions of the ethical climate is the role of the leader, with a number of researchers having explored the relationship in organisations between ethical behaviour and leadership.

What is evident from research is that ethical philosophies have little or no effect on employees' ethical behaviour, unless they are supported by managerial values which are consistent with these philosophies (Mayer et al., 2010; Stead et al., 2009). Leaders need to behave ethically in their everyday talk, decisions and actions, as the tone at the top as expressed through the words and actions of senior executives, plays a vital part in setting the standard of behaviour in an organisation, and for leaders to be effective and successful over the long term they need to behave ethically in their everyday talk, decisions and actions (Bishop & Hydoski, 2009; Toor & Ofori, 2009). The social learning theory of Bandura posits that individuals learn what behaviour is expected by observing the behaviour of role models that include managers and supervisors (Kaptein, 2011). Therefore ethical standards are undermined when managers and supervisors communicate contradictory or inconsistent signals to employees (Kaptein, 2011).

According to Brown, Trevino and Harrison as cited in De Cremer et al. (2010, p.2) and Mayer et al. (2010), ethical leadership is defined in the literature as "the demonstration of normatively appropriate conduct through personal actions and interpersonal relationships, and the promotion of such conduct to followers through two-way communication, reinforcement and decision making". Bishop and Hydoski (2009, p.72) provide four simple ways for management to set the correct ethical tone in an

organisation: 1) communicate what is expected of employees; 2) lead by example; 3) provide a safe mechanism for reporting violations, and 4) reward integrity.

Uhl-Bien and Carsten (2007) state that the predominant message in ethics discussions is that the responsibility for ethics lies primarily with leaders in the organisation. The area of concern is that organisational leaders/managers have been prime culprits in a number of ethical scandals (Uhl-Bien & Carsten, 2007), and employees rationalise that if management can commit fraud and justify it then they may also do so (Goldman, 2010).

2.7.2.3. Reinforcement System

Behaviour modification research conducted in organisations, clearly indicates that reinforcement contingencies are vital in soliciting desired behaviour from employees, with research explicitly supporting the idea that successful policy implementation-including social and ethical policies, is not likely to occur unless the behaviour is linked to the reward system (Worrel et al., 1985). The reinforcement system of an organisation must support ethical behaviour and employees should be rewarded for ethical behaviour and punished for unethical behaviour (Stead et al., 1990). Stead et al. (2009) cautions that this is not as straightforward as it sounds, as it involves a clear understanding of how ethical behaviour is defined by the organisation, in developing a system to measure and report ethical behaviour and developing a performance appraisal and feedback system that includes ethical behaviour (Stead et al., 1990).

Schminke et al. (2007, p.175) provides a quote as written by Loren Steffy in an article in the *Houston Chronicle* that emphasises the interaction between the reward system of an organisation and fraud:

"Enron, though, wasn't just Jeff Skilling. Nor, for that matter, was it just Ken Lay or Andrew Fastow or any of the other whose names are now so notoriously tainted by the scandal. It wasn't even just the hundred or so unindicted co-conspirators who drew prosecutorial scrutiny but were never charged with crimes. All of them were simply key ingredients in a far larger stew of ethical and moral failure. Enron was a laboratory of temptation, deception and hubris... it was a company where the fraud permeated the very culture of the place. It was encouraged. It was nurtured. It was rewarded."

2.7.2.4. Characteristic of the Job

Several dimensions of the job may influence the ethical behaviour of employees and employees that are more centrally located in the communication network of the organisation need to make more ethically sound decisions. In addition, jobs involving external contacts are believed to have more potential for ethical dilemmas than jobs with purely internal contacts (Stead et al., 1990).

What is evident from the literature is that the once familiar picture of ethics as an individual construct, unchanging, and not influenced by organisational influences, has not stood up to scrutiny in recent years (Paine, 1994). With both the organisational (bad barrels approach) and individual factors (bad apples approach) playing a role in ethical workplace behaviour (Fagbohungbe, Akinbode & Ayodeji, 2012; Stead & Worrell, 1990). Hence, corporate misconduct is as much a personal issue as an organisational issue (Paine, 1994).

The next section will examine a specific type of corporate misconduct, namely management fraud.

2.8. MANAGEMENT FRAUD

The section firstly examines the historical context of management fraud, before proposing a workable definition for this study. The characteristics of management fraud perpetrators are examined, as well as the different types of management fraud, and reasons for management to commit fraud are considered. Once the differences of this fraud have been clarified this section then moves to how management fraud is currently detected and prevented, before discussing the shortcomings, in the traditional approaches to management fraud prevention and detection.

2.8.1. Introduction

For the purposes of this study the two terms namely financial statement fraud and management fraud, are used interchangeably, primarily because management is responsible for producing reliable financial reports and the fair representation, integrity and quality of the financial reporting process is the responsibility of management (View Figure 2.3.: Fraud classification overview) (Green & Calderon, 1998; Murcia & Borba, 2007; Rezaee & Riley, 2010).
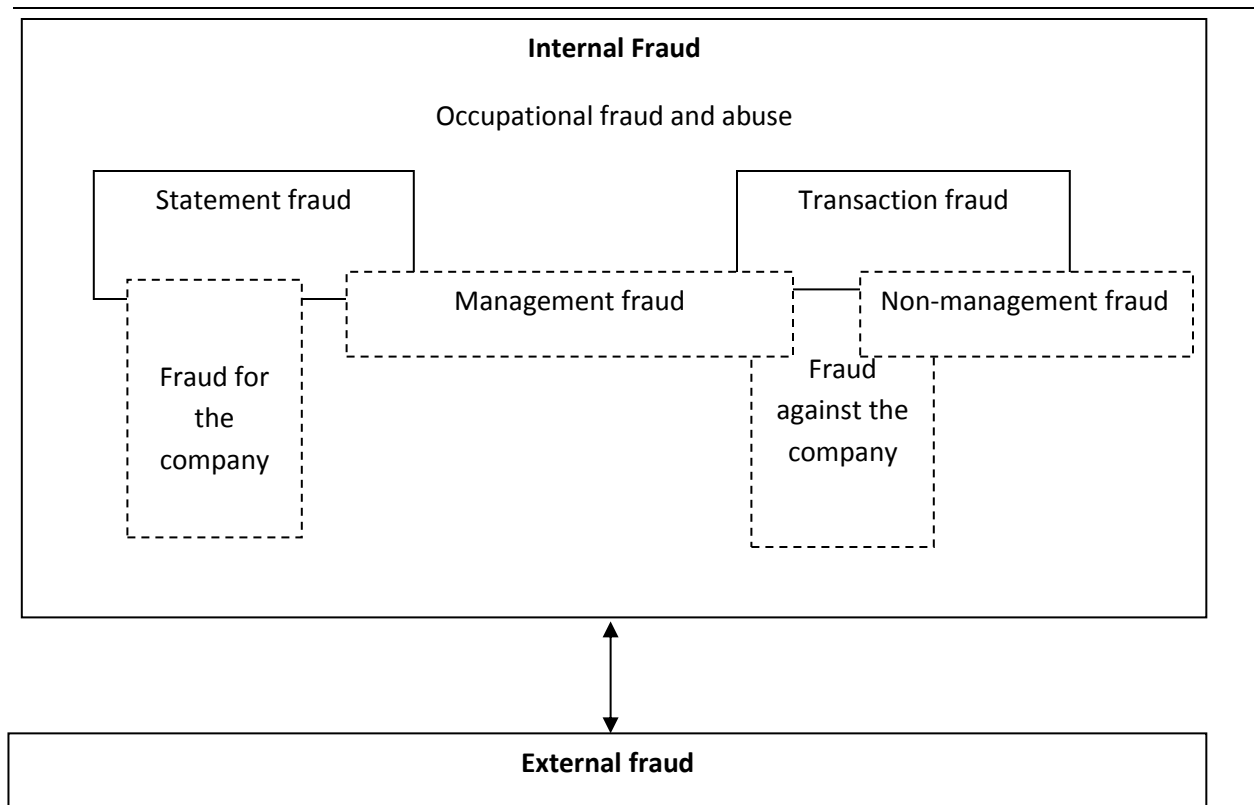
Figure 2.10. Fraud classification overview (Jans et al., 2009, p.5)

2.8.2. Historical Context of Management Fraud

Murcia and Borba (2007); Shover and Hochstellar (2006), contend that the sociologist Edwin H. Sutherland coined the term "white-collar crime" in 1939 to describe criminal activity involving individuals within organisations, and today white collar crime can be said to include management fraud. In scholarly speeches and publications, Sutherland criticized social scientists for the class bias in their near-exclusive focus on crimes of the disadvantaged (Shover & Hochstellar, 2006). Sutherland emphasised the difference between white-collar crime and street crimes by stating that white-collar crimes are committed by using guile, deceit, or misrepresentation to create and exploit the appearance of a legitimate transaction for illicit advantage, while street crimes are

typically committed by confronting victims or entering their homes or businesses (Shover & Hochstetler, 2006).

2.8.3. Conceptualisation of Management Fraud

Sutherland's definition of white-collar crime emphasised the difference between white collar crime and street crime: "crime committed by a person of respectability and high social status in the course of his occupation" (Sutherland, as cited in Shover & Hochstetler, 2006, p.6).

Sutherland's contributions broke new theoretical ground, but also created conceptual ambiguity concerning the appropriate unit of analysis for white-collar crime research, as this definition complicated the role of the prototypical victim of endemic crime, as in white-collar crime the perpetrator was the powerful politician or wealthy business person (Holtfreter, 2005; Mills & Weisberg, 2008; Shover & Hochstellar, 2006).

Although Sutherland was at times ambiguous and inconsistent in his usage of concepts, as his definition emphasized the characteristics of individuals as key components in white-collar crime (e.g. high status, respectability), but his study actually focussed on sanctions levied against the seventy largest U.S. organisations, and no-one disputes that Sutherland regarded the respectable social status of its perpetrators as the defining characteristic of white-collar crime (Holtfreter, 2005; Shover & Hochstetler, 2006). While today there is controversy in the manner regarding which white collar-crime is defined, with some researchers preferring criminal based definitions, and others contending that there is no analytical advantage to be gained by highlighting offenders privileged positions (Shover & Hochstetler, 2006). This study will now focus on a number of criminally based definitions and then proceed to illustrate definitions that emphasise the

modus operandi of the crime, before finally proposing a definition that incorporates both stances.

According to Holtfreter (2005), a large number of previous studies examined how the educational level of offenders played a role in an individual's inclination to act unethically. A definition that highlights the importance of the occupational level of the perpetrator is the definition of the *Dictionary of Criminal Justice Data Terminology*, Buckhoff and Wilson, (2008, p.54): "…non-violent crime for financial gain committed by means of deception by persons whose occupational status is entrepreneurial, professional, or semi-professional and utilizing their special occupational skills and opportunities."

In a similar light Bologna and Lindquist's (1995, p.10) definition of management fraud emphasises the organisational hierarchy of the fraudster: "Management fraud is the intentional misrepresentation of corporate or unit performance levels perpetrated by employees serving in management roles who seek to benefit from such frauds in terms of promotion, bonuses or other economic incentives and status symbols".

An additional definition that emphasises the importance of the involvement of management is provided by both Bai et al. (2008, p.340) and Spathis (2002, p.179) who define management fraud as: "….deliberate fraud committed by management that injures investors and creditors through misleading financial statements".

All of the above definitions examined the formal characteristics of criminal offences as the basis for distinguishing white-collar crime from other types (Shover & Hochstetler, 2006). Based on the above definitional standpoints, management fraud can be viewed as a crime an employee of a governmental or private-sector organisation in a position of

trust commits. A position of trust in this context means a position that carries authority over people and/or property belonging to another, usually property owned by an employer organisation or property over which the organisation has legal custody and control. The authority vested in the position of trust carries certain duties, obligations and responsibilities, inter alia honesty, diligence, protection and preservation of the property. An employee who commits management fraud based on the above viewpoint, criminally breaches that entrusted trust, either through acts of commission or by omission, by overt or covert action, by inaction, as in oversight and neglect of duty or by negligent performance of duty (Bologna & Lindquest, 1995).

Although the above definitions are useful for explanatory purposes, certain authors such as Shapiro and Edelhertz emphasise the point of "collaring the crime, not the criminal" and therefore "the character of white-collar crime must be found in its modus operandi and its objectives rather than in the nature of the offenders" (Shover & Hochstetler, 2006, p.6). Based on this viewpoint, Murcia and Borba (2007, p.166) and Spathis (2002, p.179) respectively provide the following two definitions of management fraud supporting the above stance: "Adulterated records in the financial statements by omitting facts, imprecise figures and failure to apply generally accepted accounting principles". "A scheme designed to deceive; it can be accomplished with fictitious documents and representations that support fraudulent financial statements".

The focus of the definition as provided by the Association of Certified Fraud Examiners is on the crime and not the characteristics of the perpetrator: "The intentional, deliberate, misstatement or omission of material facts, or accounting data which is misleading and, when considered with all the information made available, would cause the reader to change or alter his or her judgement or decision" (Zhou & Kapoor, 2011, p.570).

The three definitions above highlight the crime and not the character of the individual and illustrate that fraud occurs when financial statements contain falsifications so that its elements no longer represent the true picture (Spathis, 2002).

However, both stances that either emphasise the formal characteristics of the perpetrator or the crime, are equally important in our understanding of management fraud and one approach cannot be viewed as superior to the other (Spathis, 2002). Both definitional stances are equally important and share the following aspects of management fraud. Management fraud includes a number of individuals involved in the fraud and the breeding ground for this type of fraud has two general characteristics: overly aggressive targets for financial performance and a can-do organisational culture that does not tolerate poor performance (Sweeney, 2003). Albrecht et al. (2009); Hemraj (2004); Pathak and Wells (2008) and Tickner (2010) all emphasise the collusive aspect of fraud and state that a significant proportion of management fraud is committed by more than one person, requiring co-operation among several employees or involvement by external employees, leaving a document trail that is subject to internal and external audit (Ball, 2008).

The following definition incorporates both definitional stances:

> "An individual or group committing an illegal act in relation to his/her employment, who is highly educated (college), in a position of power, trust, respectability and responsibility, within a profit/nonprofit business or government organisation and who abuses the trust and authority normally associated with the position for personal and/or organisational gains." (Fraedrich et al., 2011, p.273).

For purposes of this study the following definition of management fraud is proposed:

> "A group of knowledgeable, highly educated perpetrators, who are in a position of power, trust, respectability and responsibility, who through well planned collusive schemes abuse the trust and authority normally associated with the position for personal and/or organisational gains."

This study will now proceed to examine the characteristics of this "group of knowledgeable, highly educated perpetrators" (Fraedrich et al., 2011, p. 273) before discussing the types of "collusive schemes" used to "abuse the trust and authority" (Bologna & Lindquest, 1995, p.10). The last key aspect of the definition "personal and/or organisational gains" will also be dealt with.

2.8.4. Characteristics of Management Fraud Perpetrators

According to Green & Calderon (1998), the five most frequently cited perpetrators of management fraud are 1) management (general management positions or a vice-president position other than the accounting), 2) board members, 3) the president, 4) owners, 5) the chief executive officer and the chief financial officer. A report, *Landmark Study on Fraud in Financial reporting*, provides insight into 200 randomly selected cases involving alleged financial fraud investigated from 1987 to 1997 by the U.S. Securities and Exchange commission (Bai et al., 2008; Brewer, 2008). This report adds further insight by stating that 83% of the cases involved the chief executive officer, chief financial officer or both (Brewer, 2008). Therefore the ethical standards of executives are critical to the occurrence of fraud (Brewer, 2008). According to Bai et al. *(2008)* a report by the Committee of Sponsoring Organisations of the Treadway Commission (COSO) examined fraudulent financial reporting from US public companies covering the same period 1987-1997 and some of the findings includes concur with the *Fraud in Financial reporting study*: In 72% of the cases the CEO appeared to be associated with the fraud and in 43% of the cases the CEO was involved in the fraud.

What is further evident as reported by ACFE (2009); Murcia and Borba (2007); and Ramamoorti et al. (2009), is that the majority of white-collar crimes are committed by well educated (formal education), middle aged (45-55 years), men and women (males account for little more than half of all incidents), who have a long tenure (10-15 years) with the organisation, who are often in a position of trust and have no criminal history (90% have no criminal record).

2.8.5. Types of Management Fraud

Similar to fraud, management fraud often starts with a small misstatement of quarterly earnings on financial reports that presumes not to be material, but then eventually snowballs into full-blown fraud and produces materially misleading annual financial statements (Rezaee & Riley, 2010). Ball (2008) further implies that management fraud generally shares three properties: 1) inability to meet performance expectations; 2) personal costs – pecuniary or non-pecuniary – of failing to meet expectations, and 3) being able to convince oneself that real performance will improve soon. The last aspect – being able to convince oneself that real performance will improve soon – originates for a number of reasons: if real performance does not increase, the deception must be repeated to hide the continuing performance shortfall. If real performance does not increase and the deception must continue then its effects accumulate in the accounts which increases the probability of being detected (Ball, 2008). This may result in management fraud that overstates current earnings involving accelerating revenue recognition and therefore needs to borrow revenue and earnings from future periods. This increases reported earnings in the current period, but reduces reported performance in future periods, apparently in the hope or belief that future real performance will increase and will allow the deception to be covered up. Convincing oneself that real performance will increase before the concealed up fraud is detected would be assisted by an overly strong belief in oneself and in one's company (Ball,

2008). Brewer (2008) referring to Enron, states that the same fraud that contributed to Enron's dramatic demise, sustained the life of the company long after the health of its balance sheet had been destroyed. According to Brewer (2008), the existence of fraud and the deception of fraud is accepted as long as money is being made and complacency toward the fraud is warranted.

While the Enron scandal made public the many forms of management fraud, management fraud can be committed in a number of different ways, ranging from those most frequently occurring, such as revenue fraud, to least commonly occurring, such as accounts payable fraud. (Bai et al., 2008; Ostas 2007; Rezaee, 2005). At Enron it was illicit use of off-balance sheet partnerships, while Executives at WorldCom booked routine costs of business investments and Xerox became too aggressive in its accounting of equipment leases (Hemraj, 2004). Some of the most used methods for committing management fraud include recognizing revenue prematurely, capitalizing operating costs, failing to disclose or record liabilities, special interest entities, related party transactions, fictitious inventory and inappropriately recognizing costs (Pedneault, 2009). Bai, Yen and Yang (2008, p.342) provide seven techniques to apply the above mentioned common techniques to commit financial statement fraud, as discussed in Schilt's book: *Financial Shenanigans:* 1) Recording revenue before it is earned; 2) creating fictitious revenue; 3) boosting profits with non-recurring transactions; 4) shifting current expenses to a later period; 5) failing to record or disclose liabilities; 6) shifting current income to a later period, and 7) shifting future expenses to an earlier period. The first five techniques aim at increasing current-year earnings and the last two create an illusion of steady income over years by shifting current-year earnings.

According to Crawford and Weirich (2011) one of the most common forms of financial statement fraud in recent earnings restatements by public companies is improper recognition of revenue. These authors state that there are various techniques for

improper statement of revenue, but that these techniques can generally fall into several categories, which include:

- Improper revenue recognition that includes the following techniques 1) premature revenue recognition; 2) fictitious revenue recognition; 3) sham transactions; 4) mischaracterisation of transactions are revenue;
- Overstatement of inventory: one of the oldest, most common and easiest methods of financial statement fraud;
- Improper deferral of costs: this fraud entails the failure to record incurred costs as operating costs;
- Failure to record liabilities: one of the easiest and least detectable form of financial reporting fraud is the failure to record known liabilities and the related expenses, as it does not require any entries in the accounting records or the creation of any fictitious documents.
- Smoothing operating results between accounting quarters or years or maintaining the illusion of consistent growth in earnings by accumulating unwarranted reserves in good times and reversing them to income in lean times;
- Inadequate disclosure of footnotes of MD&A (Crawford Weirich, 2011).

Rezaee (2005, p.279) expounds the types of management fraud and includes, inter alia:

1) falsification, alteration or manipulation of material financial records, supporting documents or business transactions; 2) material intentional misstatements, omissions or misrepresentations of events, transactions, accounts or other significant information from which financial reports are prepared; 3) deliberate misapplication, intentional misinterpretations and wrongful execution of accounting standards, principles, policies and methods used to measure, recognise and report economic events and business transactions; 4) intentional omissions and disclosures or presentation of inadequate disclosures regarding accounting standards, principles, practices and related financial information; 5)

the use of aggressive accounting techniques through illegitimate earnings management.

Albrecht et al. (2009, p.358) provides the following overview of the different types of financial statement fraud that have occurred in the last 12 years.

- **Misstated financial statements and "cooking the books":** Some of the examples included amongst others Qwest, Enron, Global Crossing, WorldCom and Xerox. A number of these frauds involved 20 or more people who assisted in creating fictitious financial results and misleading the public.
- **Inappropriate executive loans and corporate looting:** Examples included Dennis Kozlowski (Tyco) and Bernie Ebbers (WorldCom).
- **Insider trading scandals:** The most notable was Martha Stewart and Sam Waksal, both of whom were convicted for using insider information to profit from trading ImClone stock.
- **Initial public offering (IPO) favouristism, including spinning and laddering:** (spinning involves giving initial public offering (IPO) opportunities to those who arrange quid pro quo opportunities to those who promise to buy additional shares as prices increase). Examples include Bernie Ebbers of WorldCom and Jeff Skiing of Enron.
- **Excessive CEO retirement perks:** Companies including Delta, PepsiCo, AOL Time Warner, Ford, GE, and IBM were highly criticised for endowing huge, costly perks and benefits, such as expensive consulting contracts, use of corporate planes, executive apartments and domestic servants to retiring executives.
- **Exorbitant compensation (both cash and stock) for executives:** Many executives, including Bernie Ebbers of WorldCom, received large cash and equity based compensation that has since been determined to be excessive.
- **Loans for trading fees and other quid pro quo transactions:** Financial institutions such as CitiBank and JPMorgan Chase provided favourable loans to

organisations such as Enron in return for the opportunity to make hundreds of millions of dollars in derivative transactions and other fees.

- **Bankruptcies and excessive debt:** Because of the abuses described above and other similar problems, seven of the ten largest corporate bankruptcies in U.S. history occurred in 2001 and 2002. The two largest bankruptcies were WorldCom (largest at US$101.9 billion) and Enron (second at US$63.4 billion). Four of the seven bankruptcies involved financial statement fraud.
- **Massive fraud by employees:** While not in the news nearly as much as financial statement frauds, there has been a significant increase in fraud claims against organisations with some of these frauds being as high as $2 to $3 billion.

Although the Enron and WorldCom scandals are seen by many as the biggest in the corporate world, especially as both occurred in such a short time-span and affected the USA market, many other falls have occurred before and afterwards (See Table 2.3.) (Coetzee, 2010), with Cooper (2005) stating that in the 6 years before Enron's collapse, the SEC estimates that investors lost US$100 billion owing to management fraud.

Rezaee (2005) provides a number of examples of management fraud – see Table 2.3.

Table 2.3. Sample of management fraud cases (Rezaee, 2005, p.281)

Company	Cooks	Recipes	Incentive	Monitoring
Aurora Foods, Inc.	CFO, CEO, senior financial analyst, manager of customer financial services	Overstating reported earnings, understating trade marketing expenses	Meet analysts' forecasts by inflating the company's financial results to raise funds in an IPO.	Lack of vigilant board of directors and audit committee; lack of diligent management.
Cendant Corporation	Three former top executives	Earnings management by overstating revenue by US$500 million between 1995 and 1997.	Sell CUC and Cendant stock at inflated prices.	Lack of responsible corporate governance and ineffective audit functions.
Enron Corporation	Chairman, CEO and CFO	Established special purposes entities (partnerships) to hide debt, create common equity and overstate earnings.	Misled investors about company's profitability and debt.	Lack of responsible corporate governance. Ineffective audit functions.
Global crossing	Top executives, principal officers	Disclosing false and misleading financial statements, insider trading to inflate its market value	Overstating revenues to meet the company's performance goals.	Lack of diligent management and ineffective audit functions.
HBO and	Four top	Earnings management from	Exceed analysts'	Lack of vigilant board of directors

Company	executives and Co-President	1997 through to March 1999	quarterly earnings expectations	and audit committee; lack of diligent management
Knowledge ware	Top management team	Inflating the reported earnings by engaging in phony software sale	Meet analysts' earnings expectations	Lack of diligent management; lack of vigilant board of directors and audit committee.
MicroStrategy, Inc.	Three top executives	Overstatement of revenues	Inflate stock prices to increase demand for issuing new shares	Lack of diligent management; lack of vigilant board of directors and audit committee.
Sunbeam Corporation	Chief executive officer and four other former executives	Earnings management by creating recorded revenue on contingent sales and using improper bill-and-hold transactions.	Improve company's performance and restructuring strategies to meet analysts' expectations.	Irresponsible corporate governance, ineffective audit functions.
WorldCom	Chief financial officer, controller and other executives	Unlawfully and wilfully falsified financial records by overstating earnings by more than US$7 billion.	Inflated stock prices, cover up financial difficulties.	Greedy and arrogant executives, irresponsible corporate governance, ineffective audits.

The South African business environment has also been affected by management fraud, for example by LeisureNet in 2001 and Fidentia in 2007 (Coetzee, 2010). According to De Sarden and Lewis and Uys, as cited in Pillay, Dorasamy and Vranic (2012), corporate crime and corruption is almost institutionalised in South Africa, with South Africa's young democracy experiencing high levels of crime, including fraud and corruption. One of the most controversial scandals, according to Coetzee (2010), that is still being investigated, is the arms deal, a public sector procurements transaction. In 1995, the government of South Africa purchased US$4.6 billion worth of arms. Unfortunately many allegations of fraudulent practices have been linked to this deal, including bribery by and of various high-level political figures (Coetzee, 2010).

As seen above, the majority of management fraud cases involves company management and is the result of pressures to meet either internal or external expectations, hence management fraud is distinguished from other types of fraud both by the nature of the perpetrators and by the method of deception (Brewer, 2008). What makes the nature of white collar crime even more complicated is the notion of measuring a crime not against the number of crimes to justify the use of prosecutorial resources, but against the total economic loss and the number of people affected directly and indirectly (Mills & Weisberg, 2008). Due to the highly conflicted self-interest of the organisation and shareholders who are arguably victims, it is difficult to calculate this loss (Mills & Weisberg, 2008).

2.8.5. Reasons for Committing Management Fraud

Pathak and Wells (2008) state that previous research suggests that management fraud is marked a combination of various attitudes, subjective norms and perceived behavioural controls that influences an executive's decision to participate in fraud and a managers attitude is an indication of how willing he/she is to participate in the fraudulent act, and when a manager is participating in fraudulent acts, the attitude is generally

described as positive. A stronger positive attitude is influenced by an organisational culture that validates this type of behaviour and also rewards unethical decision as long as the company benefits. The third aspect that needs to be present to affect a manager's decision to partake in fraud, according to Pathak and Wells (2008), is the values that are important to society and those who are closest to the manager contemplating unethical acts. These subjective norms influence the decision of the executive.

Crawford and Weirich (2011) complement the above reasons through the following examples:

1. Ineffective communication, implementation, support or enforcement of the entity's values or ethical standards by management or the communication of inappropriate values or ethical standards.

2. Non-financial management's excessive participation in or preoccupation with the selection of accounting principles or the determination of significant estimates.

3. Known history of violations of laws and regulations, or claims against the entity, its senior management, or board members alleging fraud or violations of laws and regulations.

4. Excessive interest by management in maintaining or increasing the entity's stock price or earnings trend.

5. A practice by management of committing analysts, creditors and other third parties to achieve aggressive or unrealistic forecasts.

6. Failure by management to correct known reportable conditions (internal control weaknesses noted by auditors) on a timely basis.

7. An interest by management in employing inappropriate means to minimise reported earnings for tax-motivated reasons.

8. Recurring attempts by management to justify marginal or inappropriate accounting on the basis of materiality.

9. The relationship is strained between management and the current or last auditor.

Bologna and Lindquist (1995, p.13) provide 25 reasons for employee crimes most often advanced by authorities in white-collar crime.

1. The employee believes he/she can get away with it;
2. The employee thinks he/she desperately needs or desires the money or goods stolen;
3. The employee feels frustrated or dissatisfied about some aspect of his/her job;
4. The employee feels frustrated or dissatisfied about some aspect of his/her personal life that is not job related;
5. The employee feels abused by the employer and wants to get even;
6. The employee fails to consider the consequences of being caught;
7. The employee thinks: "Everybody else steals, so why not me?"
8. The employee thinks: "They are so big, stealing a little bit won't hurt them."
9. The employee does not know how to manage his/her own money, so is always out of pocket and ready to steal;
10. The employee feels that beating the organisation is a challenge and not a matter of economic gain alone;
11. The employee was economically, socially or culturally deprived during childhood;
12. The employee is compensating for a void felt in his or her personal life and needs affection, love and friendship;
13. The employee has no self-control and steals out of compulsion;
14. The employee believes a friend at work has been subjected to humiliation or abuse or has been treated unfairly;
15. The employee is just lazy and will not work hard to earn enough to buy what he/she wants or needs;

16. The organisation's internal controls are so lax that everyone is tempted to steal;

17. No-one has ever been prosecuted for stealing from the organisation;

18. Most employee thieves are caught by accident rather than by audit or design. Therefore, fear of being caught is not a deterrent to theft;

19. Employees are not encouraged to discuss personal or financial problems at work or to seek management's advice and counsel on such matters;

20. Employee theft is a situational phenomenon. Each theft has its own preceding conditions, and each thief has his/her own motives;

21. Employees steal for any reason the human mind and imagination can conjure up;

22. Employees never go to jail or get harsh prison sentences for stealing, defrauding or embezzling from their employees;

23. Human beings are weak and prone to sin;

24. Employees today are morally, ethically and spiritually bankrupt;

25. Employees tend to imitate their bosses. If their bosses steal or cheat, then they are likely to do so as well.

Managers may also gain certain personal benefits by conducting financial statement fraud. Benefits may include aspects like:

- Increased rewards through higher reported earnings;
- Enhanced worth of individual holding of organisation stock;
- Converting the organisation's material goods for personal use, and
- Obtaining an advancement or maintaining the current position within the organisation (Rezaee & Riley, 2010).

The previous sections dealt specifically with the various aspects of management fraud, and emphasised how this type of fraud differs from corruption and asset misappropriation, in terms of the characteristics of the perpetrators, different types of management fraud and reasons for committing management fraud. The study now proceeds to examine current management fraud detection and prevention strategies.

2.9. PREVENTION AND DETECTION OF MANAGEMENT FRAUD

2.9.1. Introduction

This study will proceed by firstly clarifying the difference between fraud prevention and detection and then discuss the various prevention measures. Once the prevention measures have been examined the researcher will explore various detection models and will provide a theoretically based reasoning for an alternative detection model, based on the behavioural aspects of the management fraud phenomenon.

2.9.2. Difference Between Fraud Prevention and Detection

According to Fanning, Cogger and Srivastava (1995) and Siiro (2008) and as observed in section 2.8.5., management fraud occurs in many ways and hence an effective fraud prevention and detection strategy should be multi-dimensional. Further, from the theory one can deduce that there is a definite difference between fraud prevention and detection, with Bolton and Hand (2002) describing fraud prevention as measures that stop fraud from occurring in the first place and may include, inter alia, elaborate designs, fluorescent fibres, multi-tone drawings, watermarks and personal identification numbers. In contrast, fraud detection occurs once prevention has failed and involves identifying it as quickly as possible once it has been perpetrated (Bolton & Hand, 2002).

The most cost-effective way to fight fraud is to prevent it from happening, as organisations victimized by fraud rarely recover their losses (Kranacher, 2007; Murdock 2008). Therefore, to be able to detect fraud earlier, would reduce the impact of fraud considerably, as previous research indicates the most fraudulent activities commence slowly but expand over time (Kranacher, 2007). Bologna and Lindquist (1995),

emphasise the point that it is less expensive to prevent fraud than to detect it and therefore fraud prevention should take precedence over detection.

2.9.3 Preventative Management Fraud Measures

Management fraud tends to occur most often in environments characterised by ineffective corporate governance (Rezaee & Riley, 2010). Management will be more reluctant to engage in fraud when an effective corporate governance mechanism increases the possibility of detection.

2.9.3.1. Corporate governance

After the accounting scandals and incidents of fraud, most notably those of Enron and WorldCom, the Public Company Accounting Reform and Investor Protection Act of 2002, short titled the Sarbanes-Oxley Act was signed into law on July 30th 2002 by the then United States President, George W. Bush (Rezzy, 2007). This made corporate governance a matter of law.

Corporate governance rose to importance in South Africa largely due to economic, social and political crises that necessitated change on the corporate landscape. South Africa became a global player in the market after the collapse of Apartheid in 1994, and although this was a positive development, it brought challenges in that organisations could no longer be complacent about their business practices, due to increased international scrutiny (Vaughn & Ryan, 2006). According to Coetzee (2010), various parties acknowledge the need for proper corporate guidance, for example, a number of countries and other bodies have provided and are still in the process of providing guidance by publishing codes and reports. In South Africa, the three King reports (principles-driven or apply/comply or explain-principle) as issued by the institute of

Directors in Southern Africa, as well as legislation such as the USA's SOX (rules-driven or 'comply or else'-principle) apply to this concept (Coetzee, 2010; Vaughn & Ryan, 2006).

King, as cited in Wixley & Everingham (2010, p.1), describes corporate governance as "simply the system by which companies are directed and controlled". In particular, according to Wixley and Everingham (2010), corporate governance is concerned with the structures and processes associated with management, decision making and control in organisations. The job of successfully matching management's performance targets with stakeholders' expectations can be improved by implementing sound corporate governance (Coetzee, 2010).

Governments and other regulators are beginning to understand the advantages of having an effective corporate governance strategy. According to Coetzee (2010), after the first King Report, the South African Government followed suit and since 1999, much legislation has been promulgated that focuses on sound corporate governance principles. Gloeck and de Jager (2005) provide the following examples of some of the instruments that have been created to prevent and combat fraud and corruption in South Africa: The Public Finance Management Act; King report on corporate governance for South African; JSE Securities Exchange South Africa; and The South African Protected Disclosures Act.

However, Rezaee and Riley (2010) state that compliance for the sake of compliance is not enough and that organisations should establish an ethical culture that demands and expects all participants to do the right thing and refrain from fraudulent activities. Further, a mere legal approach to corporate governance runs the risk of creating a focus on checklists and not on developing decision making capacity and independent ethical reasoning (Maharaj, 2008). When people act out of ethical conviction, they act

out of choice, which is not necessarily the case when acting out of compliance (Darcy, 2010). Corporate governance does not only consist of mere adherence to the law, but also an understanding of the spirit of the law. The corporate governance approach in South Africa is typified by the 'apply or explain' approach in contrast to the 'comply or else' approach as followed in the United States of America (Gevers, 2012). There are various reasons why the 'apply or explain' approach was adopted in South Africa. King III states that all organisations are different and an approach of 'one size fits all' would be folly (IoD, 2009, p.6). Another reason for abandoning the strict compliance approach is that the cost of compliance is burdensome, with Vakkur, McAfee and Kipperman (2010) providing evidence that rules based systems are in fact more costly than flexible, principle-based systems.

This study will now examine the instruments used in South Africa, as identified by Gloeck and de Jager (2005) to combat and prevent fraudulent activity.

The Public Finance Management Act (PFMA)

In order to enforce sound corporate governance principles, the public sector promulgated the The Public Finance Management Act (SA- No 1 of 1999 as amended by Act No 29 of 1999) and the Municipal Finance Management Act (SA – No 56 of 2003) (Coetzee, 2010). According to the National Treasury website, the Public Management Act (Act No. 1 of 1999) is one of the most important pieces of legislation passed by the first democratic government in South Africa (www.treasury.gov.za). The main objective of both of these Acts is the regulation of financial management to ensure that all revenue, expenditure, assets and liabilities of national, provincial and municipal government organisations are managed effectively and efficiently (Coetzee, 2010). The key objectives of the Public Management Act may be summarized as being to:

- modernise the system of financial management in the public sector;

- enable public sector managers to manage, but at the same time hold them more accountable;

- ensure the timely provision of quality information, and

- eliminate waste and corruption in the use of public assets (Gloeck and de Jager, 2005, p.51).

King report on corporate governance for South Africa 2009

The first King report, a fairly tentative document when compared to its successors was published in 1994; the second King report was made available publically on 26 March 2002, and the third King Report was released on 1 September 2009, and became effective from 1 March 2010 (Wixley & Everingham, 2010).

These reports contain a set of recommendations for sound corporate governance (Coetzee, 2010). These recommendations are completely voluntary, however, as far as the JSE Securities Exchange (JSE) is concerned, from 2005 listed companies were required to adhere to the King Report recommendations or indicate the extent to which they have deviated from them. King III Code has made adherence compulsory for financial years commencing on or after 1 April 2010 (Wixley & Everingham, 2010). Hence King III applies to all entities regardless of the manner and form of incorporation or establishment and whether in the public, private or non-profit sectors (Wixley & Everingham, 2010). As an ethical foundation of corporate governance, King III requires all deliberations, decisions and actions of the board and executive management to be based on the following four ethical values underpinning good corporate governance (IoD, 2009, p.50):

- Responsibility: the state or position of having control or authority and being accountable for one's actions and decisions;

- Accountability: being responsible and able to justify and explain decisions and actions;

- Fairness: free from discrimination and able to justify and explain decisions and actions;

- Transparency: easy to understand or recognise, obvious; candid; open; frank.

Consequently, all decisions made by the board and strategies or policies that are drafted should be founded on the four ethical values of responsibility, accountability, fairness and transparency.

A distinction needs to be made between King III, which proposes a voluntary participation approach, and the new Companies Act (which came into effect on 01 May 2011), which is legislation and thus enforceable. The Companies Act contains provisions governing the manner in which directors conduct their affairs and imposes strict financial sanctions on directors who do not comply. King III distinguishes between legislation and corporate governance, with corporate governance aiming to establish and facilitate the establishment of structures and processes that enable directors to discharge their legal responsibilities (IoD. 2009).

Companies Act

In 2005, the South African Department of Trade and Industry embarked on a process to update the Companies Act, No 61 of 1973. This process was executed in two phases: firstly, the Corporate Laws Amendment Act (No 47 of 2007) that came into effect on 14 December 2007 and the Companies Bill that entailed a complete and more complex

review of the Companies Act. Secondly, the new Companies Act was promulgated on 9 April 2009 and aims to enhance the importance of corporate governance (Coetzee, 2010). The Act provides for a number of new features, which include inter-alia stricter accountability and transparency requirements for state owned companies and public companies (www.deloitte.com).

JSE Securities Exchange South Africa

The JSE has been supportive of the King recommendations and requires compliance with a variety of aspects of King II. The JSE also introduced a requirement, which became effective on 1 September 2008, that all listed companies must have an executive financial director (Wixley & Everiingham, 2010).

The South African Protected Disclosures Act (PDA)

According to Pillay et al. (2011), the South African Protected Disclosures Act of 2000 was passed in June 2000 and came into effect in 2001. The Protected Disclosures Act creates certain procedures that employees who wish to disclose irregularity in the workplace can follow to prevent retaliation by their employers. The Act states that an employer may not cause occupational detriment in the form of, for example, disciplinary action, dismissal, transfer or harassment to an employee who has made a protected disclosure in good faith (Pillay et al., 2011). Since the introduction of the legislation, only five cases have been reported in the Labour Court, with three being successfully prosecuted (Pillay et al., 2011).

2.9.3.2. Limitations of preventative methods

Schminke, Arnaud and Kuenzi (2007) allude to the fact that regulations aimed at improving organisational accountability and ethical conduct do not put an end to financial and ethical misconduct. What is becoming clear is that in order to maintain an ethical organisation, organisations need to rely not just on the external regulatory pressures or formalised programs (Schminke et al., 2007). Tenbrunsel and Messick, as cited in Tenbrunsel, Smith-Crowe and Umphress (2003), argue that mechanisms designed to enforce ethical behaviour in organisations can at times be detrimental, increasing rather than decreasing unethical behaviour.

Therefore to be effective, a fraud prevention strategy must be adaptable to the ever changing fraud schemes as internal controls and technology change the operating environments for many organisations (Bolton & Hand, 2003; Siiro, 2008). Further according to Pomeranz (1995) approaches to fraud prevention and detection should focus on controlling apparent causes and specific threats, and ways must be found to close the time gap which exists between innovative types of fraud and delayed regulatory, professional or governmental elimination of the weakness.

2.9.4. Management Fraud Detection Models

Management fraud detection, according to Hoogs, Kiehl, Lacomb and Senturk (2007) and Zimbelman (2001), is challenging and therefore there are a number of studies researching advanced techniques of formal models to detect financial management fraud (Bai et al., 2008). However, due to the extreme heterogeneity of management fraud and the difficulty in differentiating the general evidence, there is a lack of systematic inquiries on the subject of management fraud and, in terms of detection, Silverstone and Davia (2005); and Heslop (2007) imply that there is no magical recipe,

checklist or manual on detecting fraud that can assist a business owner and that a number of fraudulent activities are uncovered virtually by accident (Füss & Hecker, 2008).

Although it is acknowledged that a much fraud is detected by accident, KPMG conducted a Fraud Survey in 2006 which consisted of questionnaires sent to 2146 of the largest New Zealand and Australian organisations in the private public sector. Useable responses were received from 465 organisations, which represented approximately 21% of the surveys distributed. To the question: *How is fraud detected?* the following responses were recorded; internal controls (38%) was the most common method by which the respondents detected most of the fraud, and this was followed by notification by employees (28%) (Bota & Avram, 2008).

Although internal controls was the most common method for fraud detection, the existence of an inadequate system of internal controls is not the only element responsible for the occurrence of management fraud, as top management can override adequate controls (Bologna & Lindquist, 1995; Heslop, 2007; Murcia & Borba, 2007; Zhou & Kapoor, 2011). Hayes (2006) identifies certain signs to indicate that overriding of controls has occurred and include, amongst others, when the exception becomes the rule and/or when outputs become unusual. However, Hayes (2006) implicitly states that it is impossible to catalogue all possible signs of management override. Internal controls facilitate the detection of fraud, but do not prevent fraud (Bologna & Lindquist, 1995).

From the above argument it is clear that, although organisations attempt to prevent fraudulent behaviour, these events still occur, and therefore it is important that organisations should have the necessary knowledge on how to detect fraudulent practices (De Cremer, Tenbrunsel, & van Dijke, 2010). Understanding or reading the clues to management fraud are subtle and nondescript and past studies assessed the

use of checklists or red flags to aid the auditor in recognizing the fraud risk indicators in an audit, and the development of statistical models that would help predict the existence of fraud (Jaffar, Salleh, Iskandar & Haron, 2006; Murcia & Borba, 2007; Wells, 2006). Further, Ramamoorti et al. (2009), argues that there are at present strong currents moving the fraud field inside and out to broaden the study of fraud from the classical economic models of how markets work and what drives capitalism, more into the world of human behaviour and behavioural sciences, in order to understand both the why and how of white-collar crime (Cremer, Tenbrunsel & van Dijke 2010; Dorminey et al., 2012; Ramamoorti et al., 2009).

2.9.4.1. Use of checklists/red flags

The recent cases of fraud involving companies such as Enron, WorldCom, Parmalat, Lucent, Tyco and Xerox, have eroded the credibility and integrity of financial statements in detecting fraudulent activity (Murcia & Borba, 2007). Despite all the requirements and standards in place, a significant amount of management fraud was identified, and this combined with the magnitude of Enron and WorldCom, brought increased scrutiny to the audit process and the accounting profession (Pednault, 2009).

Up until 2001, the accounting profession was primarily responsible for issuing the standards, requirements and pronouncements for audited and non-audited financial statements (Pednault, 2009). Coupled with the reporting and disclosure requirements of publicly traded entities issued by the Security and Exchange Commission (SEC), the existing standards should have prevented more management fraud incidences. The language used in those standards referred to management's responsibility to ensure the completeness and accuracy of the financial statements, as well as the sufficiency in disclosures (Pednault, 2009). According to auditing standards, an auditor should design an audit to provide reasonable assurance of detecting material errors or irregularities. However, an audit conducted in accordance with generally accepted auditing standards

may not detect management fraud, as audits that are effective in detecting errors may not be as effective in detecting irregularities such as management fraud (Coenen, 2009; Hansen et al., 1996). According to Coenen (2009), audits have not been designed to discover fraud, they are designed to find errors and improper applications of accounting rules. Coenen (2009) provides a number of differences between an audit and fraud investigation that include the fact that an audit is standard and does not vary from one audit to another, while a fraud examination is not standard. During the audit process, the auditors are examining documentation that supports the accounting entries, but are not usually attempting to verify the authenticity of the documentation (Coenen, 2009). However, during a fraud examination there is no standard process with investigative procedures being determined based on the results of the work completed (Coenen, 2009). Yet certain conditions or circumstances may come to the attention of the auditor during the audit plan, or during the actual audit process, that may indicate the likelihood of fraudulent activities (Hansen et al., 1996). Wells (In Murcia & Borba, 2007) is of the opinion that it is possible to identify certain warning signs or red flags that indicate the existence of fraudulent activity or the possible occurrence of fraud with a number of research papers having examined the effectiveness of these so called "red flags" to predict management fraud (Hansen et al., 1996). Goldman (2010); Moyes (2008); Wier and Achilles (n.d.), further state that the United States Congress was influenced in 2001 by the collapse of Enron to pass the Sarbanes-Oxley Act of 2002 and the issuing of the Statement of Auditing Standard No 99. This was done according to Wier and Achilles (n.d.), in an attempt to restore investor confidence and the integrity of financial reporting. This Act attempts to reduce the likelihood of fraud by making public company Chief Executive Officers (CEOs) and Chief Financial Officers (CFOs) directly accountable for their organisations' internal controls and financial disclosures (Silverstone & Davia, 2005). These officers namely the CEO and CFO, are required to certify the reliability of the financial statements, clearly placing ethical responsibility in top management (Micewski & Troy, 2006). The officials should be concerned about pursuing financial reporting, that is in the interest of all affected parties (Micewski & Troy, 2006). This statement requires the Certified Public Accountants (CPA's) to use 25 red flags in financial statement audits on order to detect financial fraud. According to

Goldman (2010), a major outcome of the Sarbanes-Oxley Act of 2002 is to deter and detect accounting and operational fraud.

Arens and Loebbecke, as cited in Intal and Thuy Do (2002) and Spathis (2002), summarized three categories of risk factors or "red flags" based on SAS no 82 that may imply fraudulent financial statements:

- Category 1: Management's characteristics and influence over the control environment.
    - These pertain to management's abilities, pressure, style and attitude relating to internal control and the financial reporting process;
- Category 2: Industry Conditions
    - These involve the economic and regulatory environment in which the entity operates;
- Category 3: Operating characteristics of financial stability
    - This pertains to the nature and complexity of the entity and its transactions, financial conditions and profitability.

According to Moyes (2008), the Consideration of Fraud in Financial Statement Audit which superseded SAS No. 82 raised expectations to a new and higher level. According to Moyes (2008), SAS No.99 requires that Certified Public Accountants serving as external auditors now use 42 red flags in financial statement audits to detect management fraud. If any of these "red flags" are observed but ignored then the auditor can be held to be negligent. Albrecht, Albrecht and Dunn (2000), argue that using the red-flag approach which involves identifying 42 "red flags" or indicators of fraud, and following up on them to determine whether they represent fraud or are the result of other factors, is one of the most effective ways to detect fraud. With the advent of new technology, using red flags has become formalized into a fraud detection method called the fraud hypothesis testing approach. According to Albrecht et al. (2000), this approach differs from previous research in that it attempts to formalize the use of red flags to

detect fraud pro-actively, through the formulation and testing of a number of null-hypotheses, each stating that there is no fraud of a particular type.

Summary of the use of checklists/red flags

Although SAS No. 82 strongly suggests that it is necessary to understand the nature of management fraud in order to effectively assess fraud risk, few specifics relating to the nature of management fraud are presented in the statement, and the recent fraudulent events imply that the Sarbanes-Oxley Act has fallen short of its intended goal of eliminating many of the opportunities in large organisations to commit financial fraud (Goldman, 2010; Green & Calderon, 1998).

2.9.4.2. Statistical models for management fraud detection

Bolton and Hand (2002) state that although there are a large number of varied statistical tools available for fraud detection, there are common themes. These authors describe a number of statistical tools that include, amongst others, digit analysis, statistical sampling, neural network classification systems, that can be used to detect accounting and management fraud. Zhou and Kapoor (2011) further imply that the majority of existing fraud detection techniques share similar data mining principles, but that they do differ in terms of many aspects with specialised domain knowledge. Some of the additional techniques mentioned by Zhou and Kapoor (2011) are regression, decision trees and Bayesian belief networks, while Bai et al. (2008) concurs with the above authors by stating that the majority of statistical fraud detection models assume the form of either logistic regression models or neural network models.

These statistical fraud detection tools are essentially based on comparing the observed data with expected values, but these expected values can be determined in various

ways, depending on the context (Bolton & Hand, 2002). They may be a single numerical summary of some aspects of behaviour, or they are often more complex (multivariate) behaviour profiles (Bolton & Hand, 2002). These authors further state that fraud detection can be supervised or unsupervised. Supervised methods use a database of known fraudulent cases from which to construct a model which yields a suspicion score for new cases. Unsupervised methods are used when there are no prior sets of legitimate and fraudulent observations. The techniques often employed here are usually a combination of profiling and outlier detection methods (Bolton & Hand, 2002).

A leading conceptual statistical model for fraud detection was first presented by Loebbecke and Willingham, which attempts to provide an analytical procedure for detecting the risk of management fraud (Fanning et al., 1995). This model can be expressed as P(MF) = f(C, M, A) where P(MF) represents the auditor's assessment of probability of a management fraud, and C, M and A represent the client's conditions, management's motivation and management's attitude respectively. According to this model, the incidence of fraud is very high when all three components exist simultaneously (Fanning et al., 1995). Fanning et al. (1995), is of the opinion that the most important result of the Loebbecke and Willingham study was the finding that in 86% of fraud cases at least one factor from each of the three components was present. According to Fanning et al. (1995) this strongly suggests that having all three components is a robust indicator for the existence of management fraud.

According to Fanning et al. (1995), the above model provided no proportional weighting scheme capable of determining the relative importance of individual factors indicating management fraud. Bell, Szykowny and Willingham, as cited in Fanning et al. (1995), propose a working discriminant function for the above fraud detection model, based on statistical analysis, specifically logistic regression.

Zhou and Kapoor (2011), state that regression is one of the most used methods to detect management fraud. According to the above authors transformations of variables in regression models have been studied in the context of fraud detection and include, amongst others, logit, stepwise-logistic, multi-criterion decision aid method and exponential generalized beta two.

A short overview of a number of studies that have used logistic regression models to detect management fraud will be provided. One of the founding studies was conducted by Bell, Szykowny and Willingham as cited in Fanning et al. (1995), who commenced their development of the logistic regression equations by testing the frequency of questions which occurred in the previously mentioned study of Loebbecke and Willingham. Extending on this study, the previous researchers moved through a number of logistical regression equations utilizing a cascaded approach to find the combination that would provide the strongest discriminant function. Another researcher, namely Spathis, employed a stepwise logistic regression to construct a management fraud detection model for companies in Greece. A sample of 76 Greek companies was used in the study and included 38 fraudulent and 38 non-fraudulent organisations in Greece (Zhou & Kapoor, 2011). The study indicated that debt to equity, sales to total assets, inventory to sales, total debt to total assets and financial distress, were helpful financial ratios in discriminating false from true financial statements (Bai et al., 2008). Persons as cited in Hoogs et al. (2007) utilized stepwise logistic models for fraud detection by evaluating fraud in the first year and then the succeeding year. The sample included 103 organisations for the fraud-year sample and 100 organisations for the preceding year, as identified by the SEC enforcement actions, and an equal number of non-fraud organisations matched on industry and time period. The fraud-year model accurately classified 47% of firms committing fraud, while misclassifying 14% on non-fraud committing firms, assuming a relative error cost of 30:1 of misclassifying fraud versus misclassifying non-fraud. The preceding-year model correctly classified 64% of fraud

committing firms, while misclassifying 21% of non-fraud committing organisations at the same relative error cost. This resulted in Persons concluding that financial leverage, capital turnover, asset composition and organisation size are significant predictors in fraud detection (Hoogs et al., 2007).

A disadvantage of using Logistic regression, specifically the Logit approach, according to Fanning et al. (1995), is that the development time is costly and time consuming. Therefore, due to the fact that management fraud is constantly changing, Fanning et al. (1995) suggests utilizing Artificial Neural Networks for fraud detection.

Artificial neural network model

Neural network is a popular data mining technique, according to Zhou and Kapoor (2011), that can be successfully used to detect management fraud. According to Bai et al. (2008), Fanning introduced the concept of Artificial Neural Networks to predict management fraud. Neural network does not assume an attribute's independence and is capable of mining inter-correlated data and is a suitable alternative for problems for which some of the assumptions associated with regression are not valid (Zhou & Kapoor, 2011). Artificial Neural Networks attempt to improve on conventional problem solving techniques such as discriminant analysis and logistic regression (Fanning et al., 1995).

The original study by Fanning examined a number of variables covering both quantitative (financial ratios, financial accounts and trends) and qualitative information (amongst others corporate governance, auditor, agency issues, personnel, etc.) (Bai et al., 2008). Artificial Neural Networks create their rules by learning encounters through a learning rule that adapts connection weights of a network in response to input (Fanning et al., 1995).

A sample of 204 American companies was used for the analysis. The analysis was conducted by AutoNet (one of ANN implementations) and found 20 variables to be possible indicators of management fraud. According to Bai et al. (2008), the following variables were associated with management fraud: higher accounts receivable to sales, higher inventory to sales, lower net property plant and equipment to total assets, higher debt to equity, financial distress, lower sales to total assets, and higher accounts receivable to growth rate. Fanning (1998) lists the following additional variables: board size, percentage of outside directors, the chairperson and the CEO, existence of an audit committee, existence of a compensation committee, having a non-Big Six auditor, having a profit sharing plan, growth rate, change in chief financial officer in the last three years, having the president as the treasurer, involvement in litigation, choice of the LIFO inventory method, the ratios of accounts receivable to sales, inventory to sales, net property plant and equipment to total assets, debt to equity, sales to total assets and the trend variables of a greater than 10% increase in accounts receivable, and gross margin.

According to Fanning and Cogger (1998), the neural net model selected a discriminant function that was statistically successful on a holdout sample. This model included the variables percentage of external directors, having a non-Big Six auditor, growth rate, the ratios account receivable to sales, net property, plant and equipment to total assets and debt to equity, and the trend variables of a greater than 10% increase in accounts receivable and gross margin. According to the above authors, alternative models using linear or quadratic discriminant analysis and logistic regression were not successful on the holdout sample.

The above model, according to Fanning and Cogger (1998), has the potential to detect and find management fraud through the analysis of public documents, and these authors suggest that Artificial Neural Networks offer superior ability to standard

statistical methods in detecting management fraud. Further, these authors state that this model allows for the identification of certain key variables to which an auditor should allocate additional audit time.

These models have been shown to be successful in their early stages, but there is no agreement on which data features and techniques are best for detection (Zhou & Kapoor, 2011) and these models can be impractical in application with high dimensionality and limited sample availability, requiring parsimonious variable selection that discards much of the available information (Bai et al., 2008). In addition, logistic regression models and neural networks also have limited ability to handle missing values in training data, which is an endemic problem when using publicly available financial data (Bai et al., 2008). Another limitation of logistic regression models and neural networks is the inability to utilize time varying independent variables, unless time itself in an important predictor, as is the case in time-series models (Hoogs et al., 2007).

Content analysis

LaComb, Interrante and Aggour (2007) state that many of the clues to fraud are not in the financial statements themselves, but are buried within news articles, press releases and financial footnotes.

Hence this model aims to detect fraud earlier, by basing the likelihood of fraud on words and grammatical cues used in business reporting. Management's Discussion and Analysis (MD & A) section of annual reports is utilized to identify cues used by management to conceal fraudulent activity (Churyk et al., 2008). According to this method, a process of content analysis is used to focus on specific written content that might indicate that certain aspects in the annual report are not what they seem. These include characteristics in written communication that imply lack of organisation (i.e.

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apparently attempting to be unclear so as to hide the truth), increased brevity (i.e. to decrease the risk of making mistakes), decreased optimism and less expression of certainty. According to the above authors, these grammatical errors are potential indicators of deception that appear earlier than when they are borne out of the financial results.

Natural language processing

A similar qualitative technique to the above-mentioned is NLP: Natural language processing. This technique has been used to automate the extraction of specific word patterns in news events, press releases and financial footnotes that specifically identify the types of events of interest to analysts. These events include, inter alia, changes in accounting policies, management policies, compensation plans and corporate governance.

Genetic algorithm approach

Hoogs, Kiehl, Lacomb and Senturk's (2007) study proposes a genetic algorithm approach to detect patterns in publicly available financial data that are characteristic of fraudulent financial reporting. According to Hoogs et al. (2007), genetic algorithms have a number of strengths that are well suited to the problem of fraud detection. Genetic algorithms provide the capability to learn class boundaries that are non-linear functions of multi-variables, allowing solutions that cannot be achieved through linear methods. According to Mitchell as cited in Hoogs et al. (2007), genetic algorithms provide efficient exploration of large search spaces, which allows the use of a wide range of metrics and ratios used by financial analysts in scrutinizing financial health (Hoogs et al*., 2007).*

Although some previous research on management fraud detection based the likelihood of fraud on numbers and ratios has been done, this method is usually too late to be effective since it indicates fraud long after catastrophic financial results are irreversible, and fraudsters adapt to new prevention and detection measures (Bolton & Hand, 2003; Churyk, Lee & Clinton, 2008).

2.9.4.3. Behavioural tools for management fraud detection

A significant amount of research has been written about the root causes of fraud and more specifically the "Fraud Triangle" with its three elements of opportunity, pressure/incentive and rationalization (Ramamoorti & Olsen, 2007). However, according to the above authors, what often goes unrecognized is that all three elements of the Fraud Triangle are fundamentally behavioural constructs and that the significance of the behavioural science insights increases when a person moves into the domain of fraud investigation.

Although the Fraud Triangle provides an efficient conceptual model that has served as an aid in understanding the antecedents to fraud, the financial markets and white-collar schemes have grown in complexity and in creativity since Sutherland reported his observations in the 1940s (Dorminey et al., 2012; Tugas, 2012). This complexity and creativity has resulted in the Fraud Triangle not fully capturing all the antecedents to fraud (Dorminey et al., 2012; Kassem & Higson, 2012). An additional shortcoming of the Fraud Triangle is that certain of the elements are deemed unobservable, which has resulted in various researchers adding to the Fraud Triangle in order to explain why individuals commit fraud and financial crimes beyond the rationale of the Fraud Triangle (Dorminey et al., 2012; Kassem & Higson, 2012; Wolfe & Hermanson, 2004). Literature on the Fraud Triangle is based on the assumption that the model is an equilateral

triangle carrying equally weighted elements with a number of commentators arguing for the modification of the Fraud Triangle (Dellaportas, 2013).

Additional Models of the Fraud Triangle

Based on the above arguments the following additional models used to identify the supplementary psychological and/or sociological antecedents will be examined: 1) The Fraud Scale; 2) M.I.C.E.; 3) The Fraud Diamond and the 4) A-B-C analysis of white-collar crime.

The Fraud Scale

This scale was developed in the early 1980s through analysing 212 incidents of fraud via data obtained from internal auditors of companies that were victims of fraud (Dorminey et al., 2012). This scale which is built on the Fraud Triangle replaces rationalisation with personal integrity but maintains pressure and opportunity (Dorminey et al., 2012). The degree of fraud risk as determined by the scale, is determined jointly by the above three criteria (Dorminey et al., 2012). The advantage of examining integrity is that an individual's integrity can be deduced from past behaviour, or more importantly, personal integrity affects the probability that an individual may rationalise inappropriate behaviour (Dorminey et al., 2012).

M.I.C.E.

According to Dorminey et al. (2012), not every fraud incident involves a non-shareable financial need and both the Fraud Triangle and Fraud Scale models are unable to explain an individual's apparently irrational choice to commit fraud. Murphy et al. (2011) provides another option to the Fraud Triangle which is used in fraud textbooks, but of

which the source is unknown, to explain this irrational decision and this comes in the form of the acronym MICE: money, ideology; coercion and ego (or entitlement).

This model modifies the pressure side of the Fraud Triangle, as it provides an expanded set of motivations beyond a non-shareable financial pressure (Dorminey et al., 2012). Jason Thomas defined the model taking into consideration that in financial statement fraud, the motivating elements are monetary incentives, bonuses or stock options. In this respect top executives feel the pressure to provide solid financial results (OECD, 2009)

The Fraud Diamond

Due to the inclusion of the psychological factors the Fraud Triangle has been called in recent years the *Fraud Diamond* or *Fraud Pentagon* (Dellaportas, 2013; Goldman, 2010; Kassem & Higson, 2012). Wolfe and Hermanson (2004) believe that the Fraud Triangle could be enhanced to improve both fraud detection and fraud prevention by considering a fourth element, namely capability. In addition to addressing incentive, opportunity and rationalisation Wolfe and Hermanson's (2004) Fraud Diamond gives consideration to an individual's capability, which is described as an individual's personal traits and abilities that play a significant role in whether fraud may occur. Wolfe and Hermanson (2004) described the models process: opportunity opens the door to fraud, incentive and rationalisation draw the fraudster closer to the door, and capability allows the fraudster to recognise the opportunity to walk through the door to commit the fraudulent act and conceal it.

Wolfe and Hermanson (2004, p.3) identified four observable characteristics that can be identified in case of fraud involving large amounts:

- "Authoritative positions or function within the organisation;

- Capacity to understand and exploit accounting systems and internal weaknesses, possibly leveraging responsibility and abusing authority to complete and conceal the fraud;

- Confidence (ego) that he/she will not be detected, or if caught, that she will talk herself out of trouble;

- Capability to deal with the stress created within an otherwise good person when she commits bad acts".

The Fraud Diamond emphasises the fact that the capabilities to commit fraud are explicitly and separately considered in the assessment of fraud risk. As a result the Fraud Diamond moves beyond viewing fraud opportunity in terms of environmental or situational factors (Wolfe & Hermanson, 2004).

A-B-C Analysis of White-Collar Crime

Ramamoorti et al. (2009) propose the A-B-C (a bad *Apple*; a bad *Bushel*; and a bad *Crop*) model for the analysis and categorisation of fraud. The bad Apple refers to the individual, while the bad Bushel refers to collusive fraud (associated with management override) and bad Crop refers to cultural and societal mechanisms that influence the relative incidence of fraud.

The 3 C's model

Rezaee and Riley (2010) conducted an extensive review of actual management fraud cases and suggests that this form of fraud will occur if the following three factors are present: Firstly, there must be favourable conditions for management fraud to exist. Secondly, the corporate culture must provide opportunities and motivations for the top management team to commit fraud and then, lastly, top management can choose from

among a set of accounting principles and practices, the one that rationalises its decisions to engage in financial statement fraud. This model is used to explain pre-existing management fraud causes and to predict potential management fraud and is referred to as the 3C's model – conditions, corporate culture and choice (Rezaee & Riley, 2010).

Conditions

According to Rezaee & Riley (2010), management fraud will occur if the benefits outweigh the associated costs calculated by the fraudster using the probability and consequences of detection. Hence according to the above authors, financial statement fraud will occur especially if the following conditions are met: economic pressure resulting from a continuous deterioration of earnings; a downturn in organisational performance; a continuous decline in industry performance, and lastly, a general economic recession.

According to Rezaee and Riley (2010), even though economic motives are common in management fraud, other types of motivation such as psychotic, egocentric or ideological motives may also play a significant role.

Corporate culture

The Hawthorne studies alluded to the concept of cultures in organisations and research into the concept began in the 1970s when managers and researchers began exploring the keys to survival for organisations in competitive and turbulent environments (Quick & Nelson, 2009). Corporate culture provides a more holistic and comprehensive view of the overall management philosophy and control environment (Glover & Aono, 1995).

However, over time some organisations develop dysfunctional or deviant cultures in which unlawful activity is rationalized and even institutionalized (Zahra et al., 2005). Through socialization, fraudulent practices become embedded in organisational routines; through rationalization certain fraudulent activities are legitimised through organisational folklore and newcomers learn to accept fraudulent behaviour as normal (Zahra et al., 2005). According to Sweeney (2003), most of the scandals that have affected Corporate America have underlying roots in dysfunctional organisations, which frequently overwhelm an employee's better judgment. The situation in which the potential fraudster finds him- or herself, plays a vital role in determining whether a crime will be committed as the organisation's culture plays a significant role in determining whether fraud will be committed, and this culture, lived daily at the workplace can create enormous pressures to commit criminal acts (Silverstone & Sheetz, 2007). A corrupt culture can lead to the inversion of all values. Criminal behaviour becomes normal as the comfort of conformity then becomes the Achilles heel of the middle class employee (Silverstone & Sheetz, 2007). Bernie Ebber has been viewed as the person most responsible for the organisational culture which was created within WorldCom that allowed management fraud to take place. The extreme pressure to demonstrate historically high cash flows in a maturing industry created a culture in which executives demanded that goals must be met and thereby increased the incentive to use fraudulent accounting practices, and the optimism of the executives that they could turn things around, encouraged others within the organisation to commit fraud. Employees within WorldCom had enormous respect for their superiors and were provided with bonuses and large payments for helping them, which resulted in not a single employee informing anyone of what was happening within the organisation and, by the end of the scandal, WorldCom was the single largest case of management fraud in the US (Scharff, 2005).

From an organisation's perspective, the goal is to fashion an environment that endorses a culture which encourages doing the right thing at every turn and makes perpetrating

fraud an unattractive option to the majority of employees within the organisation (Ramamoorti & Olsen, 2007).

Choice

Management can use its discretion to choose between the shortcut alternatives of engaging in illegal management or ethical strategies. Specifically when neither environmental pressure nor corporate culture is a significant influence, management fraud can occur simply as a result of management's strategic tool or discretions motivated by aggressiveness, lack of moral principles or misguided creativity (Rezaee & Riley, 2010).

2.9.5. Summary of Prevention and Detection of Management Fraud

In terms of prevention and detection, Heslop (2007); Silverstone and Davia (2005) imply that there is no magical recipe, checklist or manual on preventing and detecting fraud that can assist a business owner, and that a number of fraud incidents are uncovered practically by accident. However, to be effective, a fraud prevention and detection strategy must be adaptable to the ever changing fraud schemes, as internal controls and technology change the operating environments for many organisations (Bolton & Hand, 2003; Siiro, 2008). Further, according to Pomeranz (1995), approaches to fraud prevention and detection should focus on controlling apparent causes and specific threats, and ways must be found to close the time gap which exists between innovative types of fraud and delayed regulatory, professional or governmental elimination of the weakness, as small improvements in models that detect and predict management fraud can lead to substantial savings for accounting firms (Hansen et al.*, 1996)*.

2.10. MANAGEMENT FRAUD AND ORGANISATIONAL CLIMATE

Ramamoorti and Olsen (2007) believe that fraud detection should focus on how to deal with the underlying behavioural dynamics – the psychology of fraud perpetrators, as well as the psychology of those responsible for corporate governance, including auditors. Cohen (1995) and Peterson (2002) list a number of studies including, amongst others, the work of Deshpande, Fritzsche and Wimbush; Jones and James; Reichers and Schneider; and Shepard, that have proposed that a relationship exists between the ethical climate of an organisation and the ethical behaviour of employees. In a similar fashion, Arnaud and Schminke (2007) state that before the ethical scandals of, amongst others, Enron, Tyco and WorldCom, researchers had revealed that the ethical climate or context of an organisation has the potential to influence a number of organisational outcomes. Erben and Güneser (2008) imply that increasing interest in business ethics, with the desire to understand ethical conduct and decision-making better, has led to the development of a number of models and research within the ethical climate and ethical culture concepts.

Uhl-Bien and Carsten (2007, p.192) define ethical climates as: "Those in which established ethical standards and norms are consistently and pervasively communicated and maintained by organisational leaders and employees." Ethical climates are demonstrated through strong ethical codes of conduct, easily accessible venues and hotlines for employees to report fraudulent behaviour, and strict assurance that retaliation amongst whistle-blowers will not be tolerated (Uhl-Bien & Carsten, 2007). In contrast, unethical climates are the opposite and are characterised by questionable or even outright unethical behaviour by managers and/or employees, with little action being taken to redress the unethical behaviour and, in some instances (e.g. Enron), active condoning of inappropriate activities occurring (Uhl-Bien & Carsten, 2007). Schneider, as cited in Victor and Cullen (1988), believes that one way to comprehend organisational normative systems that guide ethical behaviour of employees is through the concept of work climate.

Based on the reasoning above, the goal of this study is therefore to propose a proactive management fraud climate model that serves as a detection tool in the organisation. Traditionally, according to Davia and Silverstone (2005), there have been two stages to fraud auditing, namely the proactive and the reactive stage. Both of these stages are characterised by different operating methodology and require different mindsets from the auditor (Davia and Silverstone, 2005). Davia and Silverstone (2005) provide the following appropriate analogy to describe a the proactive process of fraud detection: Medical doctors examine their patients for signs of malignancies, solely because they are in special risk categories, even though the patients may not have any symptoms and are in good health. In a similar fashion proactive fraud investigators examine entities at risk of fraud but have no obvious symptoms that fraud has occurred. Therefore the aim is hence to identify, proactively, "red flags" within the organisation's climate that may imply the existence of specifically management fraud.

The study conducted by Peterson (2002) demonstrated that the ethical climate questionnaire, as developed by Victor and Cullen, may predict deviant behaviour and hence the climate of an organisation can have a significant impact on deviant behaviour in the organisation. This study also showed that the factors contributing to deviant behaviour in the workplace might depend on the type or classification of deviant behaviour (Peterson, 2002). What is evident from the literature, according Schminke, Arnaud and Kuenzi (2007), is that ethical climate can be measured and therefore managed. Further, the research conducted by Appelbaum, Deguire and Lay (2005) on *the relationship of ethical climate to deviant behaviour* states that there are a number of factors that could affect the ethical behaviour in organisations. These variables include inter alia:

- Gender: Women are more likely to demonstrate higher ethical values and are thus less likely to engage in unethical behaviour than men.

- Tenure: The longer an employee has been with an organisation, the more likely it is that he/she will act ethically.
- Education: Education is positively correlated with ethical behaviour, the more educated the individual the less likely they will act unethically.
- Age: Age is correlated positively to ethical behaviour.

The findings by Appelbaum et al. (2005) on ethical behaviour of various groups, contrast the findings on management fraud that indicate that management fraud is committed by older well-educated men, with significant tenure in an organisation (Holtfreter, 2005; Murcia and Borba, 2007). In addition, Arnaud (2012) states that Victor and Cullen's framework on ethical climate has been the target of a number of severe critiques on both theoretical and practical fronts. The author above states that at a 2004 International Association for Business and Society conference, the session termed "Revisiting Victor and Cullen's theory and measure of EWC's" concluded with a call for a new theory and measurement of the construct.

From the above paragraph and the literature review conducted, it would appear that management fraud is a unique concept that does not comply with other deviant behaviour in the workplace. In addition, Wang and Hsieh (2012) propose that additional research be conducted to explore the relationships between ethical climate and employees' dysfunctional work behaviour. Schneider, as referenced in Shacklock, Manning and Mort (2011), argues that the definition of organisational climate should be restrictive and related to a specific dependant variable. Schneider, together with Parkington and Buxton, wrote "Organisations may have many climates, including a climate for creativity, for leadership, for safety, for achievement, and/or for service. Any one research effort probably cannot focus on all these but the effort should be clear about its focus" (Schneider, Parkington & Buxton, p.255, as cited in Shacklock et al. 2011).

According to Green and Calderon (1998), literature on management fraud contains little empirical information on fundamental issues, including, amongst others, accounts most affected; individuals that are most likely to be perpetrators; the primary motivations for fraud; methods used to commit management fraud, and what happens after fraud was discovered and reported in an organisation. According to Litzky et al. (2006) and Paine (1994), managers need to acknowledge their role in shaping organisational ethics and seize the opportunity to create an organisational climate that can strengthen the relationships and reputations on which the organisation's successes depend. According to Pareek as cited in Srivastav (2009), different types of organisational climates promote different kinds of employee behaviour, and therefore knowledge of organisational climate obtained in different parts of a organisation would assist in better understanding, prediction and management of employee behaviour across the constituent groups within the organisation (Srivastav, 2009).

2.11. SUMMARY

This chapter consisted primarily of two parts: the first part examined fraud in general and part two focussed specifically on management fraud.

Part one commenced by placing discussing the historical context of fraud and provided a fraud definition. The differences between negligence and fraud were examined before the various types of frauds were classified into manageable categories. The Fraud Triangle was discussed and the role of the behavioural sciences in an individuals' decision to commit fraud was explored.

Part two of the study shifted the focus of the study to a particular type of fraud, namely management fraud, and explored firstly the historical context of this specific type of fraud before providing a workable definition of it. The characteristics of management

fraud perpetrators were examined, and as the different types of and reasons for management to commit fraud were considered. The various detection models were discussed and the shortcomings of each prevention and detection model were used to stress the need for alternative behaviouristic detection models. This chapter set the scene for how organisational climate can be used to detect management fraud.

CHAPTER 3: ORGANISATIONAL CLIMATE

3.1. INTRODUCTION

This chapter commences by examining the historical context of organisational climate, before conceptualising organisational climate. Due to the conceptual complexity of this construct, this study firstly examines the nature and formation of this multi-level and multi-dimensional construct, before distinguishing organisational climate from culture. Once the construct has been conceptualised specifically for this study, the different types and classification of climates are examined, before studying the factors affecting organisational climate.

The last section of this chapter examines the levels of climate and establishes the link between organisational climate and ethical climate. The focus of this chapter then shifts to a specific level of organisational climate, namely ethical climate. The difference between ethical climate and culture is examined, before discussing two models. The first model distinguishes the antecedents of an ethical climate, while the second model indicates the overall impact of having an ethical climate. The strengths and weaknesses of various approaches to ethical climate as well as the different types of ethical climates are studied. The section ends by examining previous research on ethical climate.

3.2. HISTORICAL CONTEXT OF ORGANISATIONAL CLIMATE

Organisational climate has proven to be useful in capturing perceptions of the work context (Adenike, 2011) and, according to Denisson and Ostroff; Kinicki and Tamkins as cited in Adenike (2011); McMurray (1994) and Srivastav (2009), the construct of organisational climate is one of the most frequently researched topics in the field of

organisational psychology and has been studied extensively for the last 50 years or more (Landy & Conte, 2004).

The human relations movement in the 1930s led by Hawthorne, resulted in researchers moving from the "hard" physical environment to the "soft" psychological environment, thus the concept of organisational climate was born (Zhang & Liu, 2010). Research on organisational climate began in earnest during the 1960s and one of the first researchers to commence with studies in this field was the well-known founder of group dynamics, Kurt Lewin, with Lewin, Lippi and White applying three various leadership styles, namely democracy, autocracy and laissez-faire to create different group atmospheres of organisations and although they failed to define organisational climate, they were among of the first researchers to propose the concept of organisational climate in 1939 (Landy & Conte, 2004; Schneider, Ehrhart & Macey, 2011; Zhang & Liu, 2010). These researchers referred to a specific kind of climate, namely social climate (Schneider et al., 2011). By social climate, these researchers meant the nature of the relationship created between leaders and followers as a function of a leader's behaviour (Schneider et al., 2011). Lewin, Lippi and White manipulated the leadership style of boys' camp counsellors as the boys worked on a task and observed differences in the boy's subsequent behaviour. They attributed those differences to the social climate created by the leaders; climate was the inferred, unmeasured, mediating mechanism (Schneider et al., 2011). Although the study conducted by Lewin, Lippit and White failed to define organisational climate, it demonstrated that climate has a more powerful influence on individuals than previously acquired behaviour tendencies, and importantly was able to alter the observed behaviour patterns of group members (Litwin & Stringer, 1968).

Similar research was conducted by Chris Argyris in 1957 and by Douglas McGregor in 1960 who both presented the thought that the fairness with which managers treated subordinates gave rise to a "managerial climate". For both of the above researchers the

climate was, as in Lewin and colleagues, inferred and unmeasured (Schneider et al., 2011). Following on the work of the above researchers, Forehand in 1964 described three features of organisational climate, namely that 1) organisational climate varies from one organisation to another, 2) it is enduring and 3) it can affect the behaviour of individual members (Landy & Conte, 2004).

As researchers became interested in the climate construct, they developed what they thought were measures of climate and somewhat inconsistently they focussed on the leadership and job attributes that were the hypothetical causes of climate, rather than on the measurement of climate itself (Schneider et al., 2011). This resulted in early climate measures having leadership behaviours as one of the facets measured, job attributes as another, social-interpersonal relationships as a third and characteristics of the reward system as a fourth, but the nature of the climate being assessed was left unspecified (Schneider et al., 2011).

Despite the inconsistencies in previous research, what is evident is that organisational climate has been identified as having an impact on employee attitudes and behaviours in the workplace and is a meaningful construct with significant implications for understanding human behaviour in organisations (Benjamin, 2012; Castro & Martins, 2010; Forte, 2004; Litwin & Stringer, 1968; Neal et al., 2000). As a description of employees' perceptions of organisations, organisational climate was more similar to the real behaviour than the real environment, and on the conceptual level, the organisational climate construct has relatively well-defined boundaries and suggests considerable potential for describing and understanding individual behaviour in organisations (Hellriegel & Slocum, 1974; Zhang & Liu, 2010).

However, despite the fact that organisational climate has been studied considerably over the last few years, there is still a lack of consensus on the precise specification of

the construct with the concept being complex, multi-level and multi-dimensional (Dawson, Gonzalez-Roma, Davis & West, 2008; Landy & Conte, 2010; Neal, Griffen & Hart, 2000). The large number of definitions stem, amongst others, from the predicament associated with understanding the concept of organisational climate, as this concept has been fraught with conceptual deficiencies and contradictory results (Truhon, 2008). The next section aims to address this lack of consensus and conceptualise this complex construct specifically for this study.

3.3. CONCEPTUALISATION OF ORGANISATIONAL CLIMATE

Although the focus of organisational climate research has evolved over the past twenty-five years, organisational climate remains a difficult concept to define, with a number of researchers defining the concept differently (Benjamin, 2012; Glick, 1985; Rentsch, 1990; Webber, 2007). Despite the progress that has been achieved in the study of climate with over forty years of intensive thinking and research, there remain several unresolved issues in the climate literature (Schneider et al., 2011).

Some of these issues around climate have been present from the earliest days of climate research, such as confusion about the definition of climate, the lack of integration between molar and focussed perspectives and the lack of resolution between the study of organisational climate and psychological climate. Other issues have developed more recently, such as the failure to articulate differences between strategic climates and process climates and the lack of integration of literatures on organisational climate and organisational culture (Schneider et al., 2011), with the consistent theme throughout organisational climate literature being a concern that researchers are overzealous to measure and analyse data about a concept that is not only ill-defined, but also lacking a consistent and comprehensively applied theoretical context (Fink & Chen, 1995; Tustin, 1993; Wallace et al., 1999).

Organisational climate will now be clarified and conceptualised by addressing the themes above. However, the "what" of organisational climate will firstly be examined as once the "what" of organisational climate has been distinguished, it will be easier to study the concept of organisational climate (Fink & Chen, 1995).

3.3.1. Nature of Organisational Climate

Organisational climate relates to the recognition of the organisation as a social system and the extent to which membership is a psychologically rewarding experience (Mullins, 1989). It can be seen as a state of mutual trust and understanding among employees of the organisation and is characterised by the nature of the employee-organisation relationship and the superior-subordinate relationship. These relationships are determined by the interactions among goals and objectives, formal structure, styles of leadership, the process of management and behaviour of employees (Mullins, 1989).

It can therefore be viewed as an organisational attribute that represents the equilibrium position toward which all the psychological climates are seen to tend. In other instances organisational climate can be viewed as a real organisational attribute (e.g. technology or structure) as opposed to something "psychological". Treating organisational climate as a real thing to be encountered and experienced, means that individuals report climate not as subjects or respondents, but as informants, and therefore organisational climate reflects an insider's orientation, as opposed to an outsider's analytic categories (Cooper & Robertson, 1988). The construct is important because it provides a conceptual link between analysis at the organisational level and the individual level and can be seen as the individual's descriptions of the social setting or context of which the individual is a part (Cooper & Robertson, 1988; Field & Abelson, 1982). Organisational climate is what the people inside the organisation say it is, rather than the people outside the organisation say or think it is, or wish it would be (Dickson, Smith, Grojean, Ehrhart, 2001).

Organisational climate is characterised by a set of attitudes and beliefs relating to the organisation that is shared and collectively held by employees as a whole (Fink & Chen, 1995) and be seen as the "personality" of the organisation; that is, organisational climate is to the organisation as personality is to the individual (Hoy, Tarter, Kottkamp, 1991). It is the atmosphere that employees perceive to be created in their organisations, through rewards, practices, policies and procedures (Schneider, 1975; Lewicki, Bowen, Hall & Hall, 1988). Employees sense particular climates as a function of the flow of everyday activities, practices, events and procedures in the organisation. No persons can remember everything that happens to them and around them, hence individuals tend to group perceptions into meaningful clusters (Lewicki et al., 1988). These clusters are made up of the perception of events, practices, activities and procedures that tend to connote a common theme in the organisation (Lewicki et al., 1988). These rewards, practices, policies and procedures, according to Rentsch (1990), exist in lasting patterns and are considered to be objective properties of the organisation. The perception of climate in an organisation is a result of organisational socialisation and is dependent on organisational policies and procedures (Hicks-Clarke & Iles, 2000; Jones, 1986). It comprises the experience and perceptions of the organisation, for example (Simpson & Taylor, 2007, p.47):

- Are the people friendly or are they 'heads-down', involved in their own work and rarely speak?
- Is it authoritarian- is everyone scared of the boss?
- Are the offices cold and impersonal or covered in plants, posters and fluffy toys?
- If employees have a problem or do not understand something do they feel they can approach co-workers without feeling disparaged?
- Does management encourage initiative and innovation or is communication only one way?

Although a precise and unitary definition of organisational climate does not exist, researchers agree that certain characteristics describe the construct and differentiate it from other concepts (Castro & Martins, 2011). Castro and Martins (2011, p.2) provide a list of these characteristics:

- generally organisational climate is considered a molar construct that can change over time;
- it is perceived by and shared among organisational members, which can result in consensus among individuals;
- it consists of global impressions of the organisation that members form through interacting with each other and organisational policies, structures and processes;
- organisational climate perceptions are descriptions of environmental events and conditions rather than evaluations of them;
- the climate concept is multi-dimensional;
- it refers to the "feeling of an organisation";
- climate can potentially influence an individual's behaviour.

Although the "what" of climate has been addressed, it is of interest to note that the recent interest in organisational climate developed in part from research on organisational culture conducted during the 1970s, in which additional ways of understanding organisational life were developed (Brown, 1995). Hence there is a close and somewhat ambiguous relationship between organisational culture and organisational climate that has often been overlooked in the literature (Brown, 1995).

3.3.2. Difference Between Organisational Climate and Organisational Culture

Although organisational climate and culture have often been used interchangeably, with the definitions of climate and culture being applied synonymously, organisational climate and culture are two separate and distinct concepts (Cameron & Quinn, 2011;

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Cullen, Victor & Bronson, 1993; Hicks-Clarke & Iles, 2000; Hoy et al., 1991; Key, 1999; Landy & Conte, 2010; Schneider & Bowen, 1995; Simpson & Taylor, 2013; Wallace et al., 1999).

According to Glick (As cited in McMurray, 1994) and Hoy et al. (1991), climate and culture approaches emanate from different intellectual traditions. Organisational climate has its origins in the Lewinian social psychology, and hence a positivist paradigm, that uses questionnaires to directly assess member perceptions of organisational events but does not attempt to interpret the meaning of those events (Rentsch, 1990). McCarthy (1998) states that the culture concept has its origins in the anthropological theory, with psychologists working on both the conceptual and empirical work of anthropologists.

It was only in 1978 that the first major analysis of the informal dimensions, focussing on organisational culture and management, attracted attention in the mainstream literature of organisational theory (Wallace et al., 1999). In 1979 Pettigrew suggested that organisational cultures consist of cognitive systems explaining how individuals reason, think and make decisions (Pettigrew as cited in Wallace et al., 1999). Pieterson (1991) suggests that when distinguishing these two conceptual ideas, it is vital to realise that organisational culture is entrenched in an organisation on three levels:

- Level one (surface culture) refers to all tangible objects and phenomena such as records, physical assets, documents, technology, language, work procedures, rituals, methods of production, dress code and terms of address.

- Level two (intermediate culture) encompasses those phenomena which are partly observable and partly unobservable. Level two contains aspects of the culture such as motivation, socialised norms, attitudes and shared values. The phenomena characterising level two have a definite psychological existence. This existence lies in the fact that they guide and influence activities in the organisation.

- The last level (deep culture) encompasses those unconsciously held basic beliefs and assumptions about life.

Parumasar (2008) states that an organisation's culture can be compared to an invisible web, which is spun by the employees of the organisation over a period of time. This net then creates bonds between groups of individuals based on values and expectations (Parumasar, 2008). This cultural web not only includes the structural and systems perspectives of organisations, but also the symbolic "soft" features (Brooks, 2009), with culture summarized by Cohen and Fink (2001) to include all aspects that indicate the way things are done or the prevailing atmosphere, general notions or how members are supposed to act and feel. Organisational culture can be perceived by studying the organisation's history, ideologies, philosophy, symbols, myths, stories, and sayings. Organisational professionals state that the culture of an organisation cannot be managed, but the change of the culture can be managed (Critchley, 1993).

While organisational climate refers to organisational members' perceptions, where behaviour patterns are shaped by the common values, beliefs and norms within the organisation, and can be perceived as a feature in the core of a circle that includes culture, ecology, individuals, organising and social systems which surround the organisation and as an institution effected by them (Güll, 2008; Tseng & Fan, 2011).

It appears as though organisational culture seems to be a more comprehensive concept than organisational climate, as organisational climate slots into the intermediate level of culture; consequently climate forms part of the less manifested and communicable aspects of an organisation (Pietersen, 1991). Coetzee (1991), in contrast, sees organisational climate as the employee's perception of and attitude towards happenings in the organisation and the "temperature" prevailing among the employees within a

given time frame. Organisational climate is seen as changeable, shorter term and relatively easy to change. Falcione and Kaplan as cited in McMurray (1994), concur with the above author by suggesting that organisational climate is an assessment of a number of elements at any given moment.

Moran and Volkwein (1992) list several differences between organisational climate and culture.

Table 3.1. Summary of the differences between organisational climate and culture (Castro and Martins, 2010; Gerber 2003; Hoy et al*.,* 1991)

	Organisational Climate	**Organisational Culture**
Discipline	Psychology and Social Psychology	Anthropology and Sociology
Method	Survey Research and Multivariate Statistics	Ethnographic Techniques and Linguistic Analysis
Level of Abstraction	Concrete	Abstract
Content	Perceptions of behaviour	Assumptions and ideology
Characteristic	Is a relatively enduring characteristic of the organisation	It is a highly enduring characteristic of the organisation
	Evolves more quickly and changes rapidly	Evolves slowly and is not easy to change
	Unique characteristics of individuals are evident	Collective characteristics are exhibited
Visibility	Is more visible and operates at the level of attitudes and values	Is relatively invisible and is preconscious in individuals

Methodology	Quantitative methodology is used	Qualitative methodology is used

From Table 3.1. and the literature it is evident that there is a difference between the concepts of organisational climate and organisational culture, though there are definite overlapping parallels (Landy & Conte, 2010; Pieterson, 1991; Schneider, 1990).

Wallace et al. (1999) summarise the difference between organisational climate and culture by supporting the view of Ostroff and Schmitt that organisational culture is created from a broad range of internal and external influences, some of which are seemingly beyond managerial control, while organisational climate is held to be a summary perception of how an organisation deals with its members and environments, and thus develops specifically from internal factors primarily under managerial control and influence (Wallace et al., 1999). According to Landy and Conte (2010), climate refers to the context in which action occurs, while culture is about the meaning intended by and inferred from those actions. Hence an individual's attitude towards climate evaluation is the individual's reaction to the culture, not the description of the culture itself (Pietersen, 1991). A helpful distinction is that climate is defined by shared perceptions of behaviour, while culture consists of shared assumptions and ideologies (Hoy, Tarter & Kottkamp, 1991). An individual's description of the organisation does not indicate whether the employee considers it a good place to work (Shockley-Zalabak, 1999).

Denison (1990) believes that the debate about the differences between organisational climate and culture concerns the methodological differences that have managed to obscure basic substantive similarities. Güll (2008) and Turnipseed as cited in McMurray (1994) state that organisational climate is a quantifiable concept, while organisational culture is more qualitative by nature and therefore less measurable. Researchers of

organisational climate are utilising quantitative techniques and multivariate analyses to identify patterns of perceived behaviour in organisations (Glick, 1985, Xenikou & Furnham, 1996). Organisational climate researchers assume that organisations are rational instruments to accomplish purpose, thus they search for rational patterns. The goal of studying climate is to determine effective strategies of change (Hunsaker & Cook, 1986). In contrast, scholars of organisational culture tend to make use of the qualitative and ethnographic techniques of anthropology and sociology to examine the character or atmosphere of organisations (Glick, 1985; Stapley, 1996). Culture researchers assume that the culture of an organisation is a natural outgrowth of a particular time and place and as such culture is not responsive to attempts at manipulation and change (Hoy, Tarter & Kottkamp, 1991). Tustin (1993) and Verwey (1990) allude to the fact that the normal way of studying organisational climate is to aggregate the measures of the individual's perception of the organisational climate. However, this method does not reveal the individual perception of each of the individuals measured. Due to culture being such an abstract concept, organisational climate is a more practical way of representing individuals' emotions about a specific organisation's value, authority systems and motivation policies (Tseng & Fan, 2011). Through vicarious observation and interpersonal interaction of an organisation's climate, organisational members learn appropriate and acceptable behaviour (Tseng & Fan, 2011).

The parallels between the two concepts are emphasised by Moran and Volkwein (1992) and Hicks-Clarke and Iles (2000) who contend that climate and culture are related terms, as the climate of an organisation is strongly influenced by the organisation's culture and the perception of organisational practices by individuals within organisations. According to Brink (1996), an analysis of the literature on organisational climate and culture implies that the concepts cannot be viewed as mutually exclusive, as organisational climate and culture influence each other. Moran and Volkwein (1992) claim that while organisational climate and culture may be conceptually distinct, both constructs are related through the influence an organisation's culture exerts on forming

an organisation's climate. Hughes, Ginnet and Curphy (2002) support the above stance, as they view organisational climate and culture as a function of or reaction to each other. Or, stated differently, organisational climate is concerned with the way in which employees perceive the characteristics of an organisational culture, while culture sets the boundaries of behaviour (Sherman, Bohlander & Chruden, 1988). Climate and culture appear to address common phenomena (Denison, 1996; Schein, 1988). Maxwell and Thomas propose peaceful co-existence between organisational climate and organisational culture, while O'Reilly, Chapman and Caldwell discovered evidence of variables within an organisation's culture profile that were similiar to the work of Koys and DeCottis's dimension of organisational climate in many respects (as cited in McMurray, 1994). Burke and Litwin (1992, p.526) summarise the above discussion by stating that "climate is, of course, affected by culture, and people's perceptions define both, but at different levels".

Denison (1990) stresses the point that only when individuals agree about the similarities of the two concepts, can they delineate the differences between the concepts. Denison (1990) postulates that argument for the similarities between organisational climate and culture is based on three premises.

- Both organisational climate and culture focus on organisational-level behaviour characteristics, which implies that organisational divisions are a viable level of analysis of behaviour.

- Collectively these concepts cover a wide range of phenomena which range from deeply held assumptions to behaviour that is rooted in these assumptions.

- Organisational climate and culture have a similar problem with explaining how the behavioural characteristics of a system influence the individual in an organisation and how individuals influence the behaviour of the organisation.

What is evident from this discussion, is that organisational climate and organisational culture reside on the same continuum, with organisational climate being grounded in individual consciousness, while culture is largely pre-conscious (McMurray, 1994). Climate is an individual construct that displays a point of reference based on personal values while culture is a shared phenomenon within a group (James, James & Asche, 1990; Schein, 1985; van Vianen & Prins, 1997). Further, it appears that organisational culture is a more implicit concept than organisational climate, while organisational climate consists of more empirically accessible elements, such as behavioural and attitudinal characteristics (Moran & Volkwein, 1992; Wallace, Hunt & Richards, 1999). Seen within this context, climate can be viewed as having a direct effect on behaviour in an organisation while culture entails the study of the meaning of events in an organisation (Tseng & Fan, 2011). Hence, if the aim of research is to describe behaviour, of the employees in the organisation, with the intent to manage and change the behaviour then a climate approach seems more desirable (Hoy et al*., 1991;* Moran & Volkwein, 1992). According to Field and Abelson (1982), the common element of the various definitions of organisational climate is that organisational climate has enduring qualities, which may be measured and which influence the behaviour of the individuals in the organisation.

The complexity in understanding the multi-level organisational climate construct has been partially dealt with by focussing on the nature of organisational climate and emphasising the differences between climate and culture. This study will now proceed to conceptualise the construct specifically for this study.

3.3.4. Conceptualisation of Organisational Climate for this Study

From organisational climate literature it is evident that there are primarily two popular approaches to the study of organisational climate, namely the cognitive and the shared-

perception approach (Webber, 2007). Zhang and Liu (2010) state that organisational climate describes members' perception of their work environment with two basic modes apparent: one is the micro mode, which is aimed at certain dimensions or a particular environment in the organisation and the other macro mode which is aimed at the organisational climate as perceived by individuals in the entire work environment (Zhang & Liu, 2010). The cognitive approach, according to Webber (2007), regards the concept of climate as an individual perception and a cognitive representation of the work environment. This perspective emphasises the individual level of climate assessments (Webber, 2007).

A definition which emphasises the individual's perception of organisational climate is provided by Ashworth (1985, p.837): "perception of the psychologically important aspects of the work environment". As such, organisational climate can be viewed as the "personality" of the organisation, that is, organisational climate is to the organisation as personality is to the individual (Hoy, Tarter, Kottkamp, 1991). The definition of Ashworth (1985) emphasises the individual's perception of the work environment rather than a consensus view, as different individuals may perceive the same work environment in different ways (Johnstone & Johnstone, 2005).

Despite the support for the cognitive approach research on organisational climate emphasised employees' overall or global perception of their organisations, and is based on what Lewin termed life space, which was based on the concept that individuals create consistent cognitive representations of the total situation (Schulte, Shmulyian, Ostroff & Kinicki, 2009). This implies that organisational climate should be conceptualized as a set of global perceptions held by individuals about their objective organisational situations and interrelationships between them (Campbell, Dunnette, Lawler & Weick, 1970; Churchill, Ford & Walker, 1976). From this macro level view, organisational climate can be seen as a state of mutual trust and understanding among employees of the organisation and is characterized by the nature of the employee-

organisation relationship and the superior-subordinate relationship (Mullins, 1989). These relationships are determined by interactions among goals and objectives, formal structure, styles of leadership, the process of management and the behaviour of employees (Mullins, 1989). Organisational climate can therefore be viewed as a way of summarising numerous specific, detailed perceptions of a small number of general dimensions and is a concept that describes the quality of the environment as subjectively perceived by the organisation's employees (Schneider, 1975). Schneider as cited in Adenike (2011), describes climate as an experientially based description of the work environment and, more specifically, employees' perceptions of the formal and informal policies, practices and procedures in their organisation. From the above it is evident that organisational climate relates to the recognition of the organisation as a social system and the extent to which membership is a psychologically rewarding experience.

Another early definition and one of most accepted, is provided by Forehand and Gilmer (1964), who view organisational climate as a set of characteristics that describes an organisation, distinguishes it from other organisations, is relatively enduring over time and can influence the behaviour of individuals in it (Moran & Volkwein, 1992). Brown and Brooks (2002, p.330) define organisational climate as the: "feeling in the air", while Mullins (2005, p.889) views organisational climate as the prevailing atmosphere surrounding the organisation: "prevailing atmosphere surrounding the organisation, to the level of morale, and to the strength of feelings or belonging, care and goodwill among members."

From the above views and definitions, it is evident that climate reflects the interaction of personal and organisational characteristics and that approaches to climate solely on objective organisational characteristics appear to be excessively organisationally orientated while on the other hand, approaches based on personal characteristics of members seem to be too individually orientated (Schneider, 1975). Since organisational

climate is conceptualised as being caused by diverse experiences and as causing later behaviours, it is actually an intervening variable in the list of variables available for organisational psychology research. It is not an output in the sense that performance and turnover are outputs. Therefore, contrary to the way it has been used in most research, organisational climate is not an independent construct that can be instantaneously rearranged (such as working conditions or formal structure) (DuBrin, 1984; Kossek & Lobel, 1996). Organisational climate is a perception that results from the diverse events occurring to and around individuals and may affect job experiences, and is an outcome only in the sense that it is a global summary of perceptions rather than the perception of a discrete event (Schneider, 1975). Schneider and Reichers; Zohar and Luria as cited in D'Amato and Zijlstra (2008), view organisational climate as the shared appraisal of individuals in a group or team of the work setting, while Bruce and Wyman (2002, p.5) define organisational climate as the: "psychological environments in which behaviour of individuals occurs".

Schneider (1990) views organisational climate as individual perceptions about salient characteristics of the organisational context. Hence organisational climate is the result of interaction among the organisations: structure, systems, culture, leader behaviour and employees' psychological needs (Pareek as stated in Srivastav, 2006, p.125). Proponents of this notion base their arguments on Indik's (1965) linkage model which states that the linkage between an objective attribute and a dependent variable is mediated by two processes, the organisational process and the psychological process. Organisational climate is viewed as a situationally determined psychological process in which organisational climate variables are considered to be causative factors for attitudes and performance. Hunsaker and Cook (1986, p.551) define organisational climate:

> "…as the descriptive perceptions individual's form of the work environment; and the attitudes that stem from climate influence performance motivation and job satisfaction".

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Hoy et al. (1991) extend this definition by stating that organisational climate is the set of internal characteristics that distinguishes one organisation from another and influences the behaviour of the employees in the organisation. The holistic nature of the climate perceptions according to Schneider and Snyder, is such that perceptions function as a frame of reference for the attainment of some congruity between behaviour and the system's practices and procedures (Kangis & Williams, 2000, p.531). According to Erakovich et al. (2002), individual norms function in the organisational climate and evolve into organisational systems that are well known by employees. Two definitions that emphasise the above view are the definition of Shanker and Sayeed (2012, p.471) who define organisational climate as a: "…global impression of one's organisation and seething personal impact of the work environment" and McMurray (1994, p.4) who view organisational climate as a: "...descriptive construct reflecting consensual agreement amongst members regarding key elements of the organisation in terms of its systems, practices and leadership style".

West, Smith, Feng and Lawthom as cited in Kangis and Williams (2000, p.531), also emphasise the collective nature of the concept of organisational climate: "…perceptions that organisation members share of fundamental elements of their organisation".

A comprehensive definition that incorporates a number of previous definitions and stances is supplied by Moran and Volkwein (1992, p.4) who define organisational climate as:

> "…a relatively enduring characteristic of an organisation which distinguishes it from other organisations: and a) embodies members' collective perceptions about their organisation with respect to such dimensions as autonomy, trust, cohesiveness, support, recognition, innovation and fairness; b) is produced by member interaction; c) serves as a basis for interpreting the situation; d) reflects the prevalent norms, values and attitudes of the organisation's culture; and c) acts as a source of influence for shaping behaviour".

The organisational climate definition as provided by Castro and Martins (2011, p.2), integrated the definitions of Gerber, Moran and Volkwein and is proposed in adapted fashion for use in this study as it emphasises the role of norms, values and attitudes in the behaviour of individuals and integrates the cognitive and shared perception approach:

> The relatively enduring and shared perceptions of feelings and attitudes that organisational members have about fundamental elements of the organisation, which reflect the established norms, policies, values, and attitudes of the organisation's culture and influences individuals' behaviour positively or negatively.

The "…shared perceptions of feelings and attitudes that organisational members have about fundamental elements of the organisation…." implies that many different types of organisational climates can exist in an organisation

3.4. TYPES OF ORGANISATIONAL CLIMATES

In 1975 Schneider conducted a review of the then-existing climate literature and reached the conclusion that if climate is to demonstrate validity against outcomes, then the climate measured needed to focus on the outcome or outcomes of interest (Schneider et al., 2011). Schneider proposed that climate adopt a "climate for something" approach, focussing on the assessment of the dimensions of climate on the outcome or outcomes of interest (Schneider et al., 2011). As organisations are multifaceted, a number of organisational climates will exist at any one time, addressing different aspects of the work environment, such as customer service and safety, with different departments or work units in an organisation experiencing different climates (Bulutlar & Oz, 2008; Grojean, Resick, Dickson & Smith, 2004; Peterson, 2002; Schminke et al., 2007; Victor & Cullen, 1988). Grojean et al. (2011) and Schneider and

Reicher (1983) indicate that different work settings have different climates for specific things such as safety, production, service, security and quality, while specialised measures of organisational climate have also been produced; an example of these specialised climates is a service climate and safety climate (Nicholson et al., 1995).

According to Dickson et al. (2003), organisational climates vary in both strength and direction and the strength of climate depends on the degree of agreement among members of the organisation about the climate. Strong situations are created when aspects of the situation lead individuals to perceive events the same way, induce uniform expectations about the most appropriate behaviour and instil the necessary skills to perform that behaviour (Schneider, Salvaggio & Subirats, 2002). Mischel (as cited in Schneider et al., 2002), argued that individual differences will determine behaviour most clearly in ambiguous and weak situations and that in weak situations, individuals will expect any response to be equally appropriate, while where events are perceived in the same way and where expectations are clear, individuals in that setting will produce uniform behaviour (Schneider et al., 2002). It follows that when climate strength is both positive and strong, one would expect the most consistent positive behaviour, while when climate is both strong and negative, one would expect the most consistent negative behaviour from employees (Schneider et al., 2002). Climate direction, on the other hand, refers to whether the members of the organisation share a perception that a high or low level of the variable in question is appropriate (Dickson et al., 2003).

Litwin and Stringer (1968) distinguish three different types of organisational climates:

- Power motivated climate
- Affliliation orientated climate
- Performance orientated climate

The power motivated climate specifies that decision making is done on the higher levels, communication activities are well described and employees can use very little or no discretion in decision making (Litwin & Stringer, 1968). Power orientated climates are appropriate in organisations where the work is highly routine and repetitive (Nasser, 1975). Nasser (1975) provides the following guidelines for the creation of a power-orientated climate:

- Provide extensive structure.
- Allow individuals to obtain positions of responsibility, high status and influence.
- Encourage the use of formal authority as a basis for resolving conflict and disagreement.

The affiliation-orientated climate focuses on the development of good work relationships and management plays an advisory role in decision making (Litwin & Stringer, 1968). Litwin and Stringer (1968) provide guidelines for management to create an affliation-orientated climate:

- Allow the development of warm close relationships.
- Provide support and encouragement for the employees.
- Provide considerable freedom and very little structure and constraints.
- Give the employee the feeling of acceptance in terms of a family group.

Affiliation-orientated climate will be appropriate where close relationships are demanded for effective job functioning. In large organisations, where competent and motivated employees are working together but where some non-coercive means for generating organisational cohesion and team spirit is required, an affiliative climate may be appropriate (Nasser, 1975).

Lastly, in the achievement-orientated climate participative objectives are set. High levels of performance expectations are communicated to employees as well as feedback on their performance (Litwin & Stringer, 1968). According to Nasser (1975) the following steps can be taken to create an achievement-orientated organisational climate:

- Emphasise personal responsibility.
- Allow calculated risks.
- Give recognition and reward performance.
- Create the impression that the employee is part of a successful team.
- Provide a structure (rules, procedure and formal communication channels). The structure must be more than moderate.

Achievement-orientated climates are appropriate in areas that demand employee initiative and calculated risk-taking and in organisations seeking rapid growth in a changing environment (Nasser, 1975).

But what is evident is that climate types can be categorised into two broad classifications: 1) aggregated perceptions of organisational conventions regarding forms of structure and procedures for the use of rewards and control, and 2) aggregated perceptions of the existence of organisational norms supporting values such as providing warmth and support to peers and subordinates (Victor & Cullen, 1998).

Schneider and Reicher (1983) attribute the development of climates to three sources: common exposure to organisational members to the same objective structural characteristics; attraction, selection and attrition of organisational members, resulting in a homogeneous set of members, and social (symbolic) interaction leading to shared understandings among organisational members.

A significant conceptual and empirical advance in climate research was the change from an unspecified molar climate construct (one focussed generically of dimensions related to organisational practices associated with positive employee experiences at work) to a more focussed strategic or process climate (the assessment of process constructs as well as outcome constructs) (Carr, Schmidt, Ford & DeShon, 2003; Schneider et al., 2011). This change has resulted in more focussed conceptual thinking about the climate of interest and resulted in the items used for assessment having an explicit focus on the strategic outcome (service, safety) or process (ethics, justice) of interest (Schneider et al., 2011). The distinction between molar and specific climate constructs is important as it emphasises different research goals (Carr et al., 2003).

3.5. CLASSIFICATION OF ORGANISATIONAL CLIMATE

The predicament in defining organisational climate is that organisational climate has been validated as an organisational phenomenon, therefore clarity is needed about which hypothetical model accounts for the manner by which the perceptions of individuals are transformed into an organisational entity. The central question is "…how is it that individuals who are confronted with a vast array of stimuli in the work environment come to have relatively homogeneous perceptions of those stimuli?" (Schneider & Reichers, 1983, p.25).

Moran and Volkwein (1992) state that if organisational climate is viewed from various perspectives, it becomes problematic to identify a more specific structured definition, and therefore these researchers identified four approaches to clarify the construction of organisational climate: 1) structural; 2) perceptual; 3) interactive, and 4) cultural approach.

3.5.1. Structural Approach

Initially organisational climate was viewed as an objective construct arising from several aspects of the organisational structure such as organisational size, the number of hierarchical levels, the nature of the technology used, the degree of decision making and the extent to which formal rules and policies apply to individual behaviour (Castro & Martins, 2011). According to this approach, the organisational setting influences people's attitudes, values and perceptions of organisational events (Schneider & Reichers, 1983).

The structural approach aims to locate the origin of climate in organisational properties (Schneider & Reichers, 1983) and addresses the relationship between objective and perceptual measures of organisational climate and views organisational climate as a characteristic or attribute of the organisation (Moran & Volkwein, 1992). Guion (1973) states that if organisational climate is considered as an organisational attribute, but measured by perceptions, then the accuracy of these perceptions should be validated against objective external measures.

Organisational climate is defined according to this approach as the common perceptions of members in an organisation who are exposed to the same organisational structure. As observed in Figure 3.1., the organisation's structure leads to the organisational climate, which is then perceived by individual members of the organisation.

Figure 3.1. Structural approach model (Moran & Volkwein, 1992, p.24)

Structuralists do not deny the influence of an individual's personality in determining the meaning of organisational events, but they give structural determinants primary consideration because of their objective nature (Schneider & Reichers, 1983).

Several shortcomings to this approach have been highlighted (Moran & Volkwein, 1992; Schneider & Reichers, 1983). Moran and Volkwein (1992) state that this methodology does not account for organisations in which different group climates exist in one organisation, despite having similar structural factors throughout the organisation. The structural approach contends that climate arises in response to identifiable features of the organisation's structure, hence it follows that an organisation's climate must validate a consistent and significant relationship with the organisation's structural characteristics. However, there is a high degree of inconsistency in research conducted in this regard (Moran & Volkwein, 1992). Bhagat and McQuaid (1982); Castro and Martins (2011) further question the validity of this approach as it provides inadequate consideration to the subjective impact that structural variables have on individual's reactions to a situation. According to Moran and Volkwein (1992), the structural approach suggests that the complete convergence of perceptions and objective factors may be theoretically possible, but such a condition is unlikely since organisational climate is not a measure of aggregated individual perceptions or organisational characteristics, since it is a measure of collective social meaning.

3.5.2. Perceptual Approach

In contrast to the standpoint of the structural approach, the perceptual approach places the emphasis for the basis of organisational climate on the perceptions of the individual in the organisation, and postulates that individuals are influenced by their perceptions of- or the psychological meaning individuals attach to- organisational characteristics (Castro & Martins, 2011; Moran & Volkwein, 1992). Individuals interpret and respond to situational variables in a manner that is psychologically meaningful to them and not simply on the basis of the objective descriptions of specific structural or situational attributes (James, Hater, Gent & Bruner, 1978). In terms of this approach, organisational climate is observed at the individual level as psychological climate, hence psychological climate is a product of perceptual processes that result in cognitive representations which reflect an interpretation of the situation to the individual in form which is psychologically important (Moran & Volkwein, 1992). The incorporation of the concept organisational conditions enhances the more narrow approach to structural properties which was found in the structural approach. Included in these process characteristics of the organisation are influence, communication, leadership and decision making patterns that operate within the organisation (Field & Abelson, 1982). Evident from figure 3.2. is how, in this approach, the individual perceives the organisational conditions and then creates a psychological representation of the climate.

Figure 3.2. Perceptual approach model (Moran & Volkwein, 1992, p.25)

The basic tenet of the perceptual approach pivots on the axial point that individuals perceive organisational conditions and create a psychological representation of organisational climate (Field & Abelson, 1982). Schneider as cited in Castro and Martins (2011), states that this approach can be viewed as "personalistic" in the sense that climate is an individual perception. The term organisational conditions intended to embody structural as well as process characteristics of the organisation (Field & Abelson, 1982).

An impediment to the perceptual approach is that it places the source of climate primarily with the individual. This implies that meaning is something that the individual brings to and imposes on organisational processes and events (Castro & Martins, 2011; Moran & Volkwein, 1992). Consequently, the perceptual approach provides insufficient detail regarding the extent to which perceptions about the situation and the interpretation and assignment of meaning are produced by the interaction of the organisation's members. The perceptual agreement is essentially the end point of organisational climate, and the interaction among members produces a patterning or structuring of meaning which enables perceptual agreement (Moran & Volkwein, 1992).

3.5.3. Interactive Approach

The interactive approach does not assume that the origin of climate is only within the characteristics of the organisation or within the individual, but that the interaction of individuals in responding to their situation brings forth the shared agreement, which is the source of organisational climate. The interactive approach can be viewed to contain multiple meanings. As viewed in Figure 3.3., this approach references the interaction among employees as they engage in the process of comprehending and interpreting organisational realities. However, the interactive approach recognises that the process of generating meaning requires the interaction between subjective awareness and objective conditions. This represents a crucial difference from the previous two approaches (Moran & Volkwein, 1992).

Figure 3.3 illustrates the relationship between organisational conditions, the individual perceiver, the interactions of the group members and the organisational climate. What is evident from figure 3.3 is that organisational climate is the result of employees' interaction.
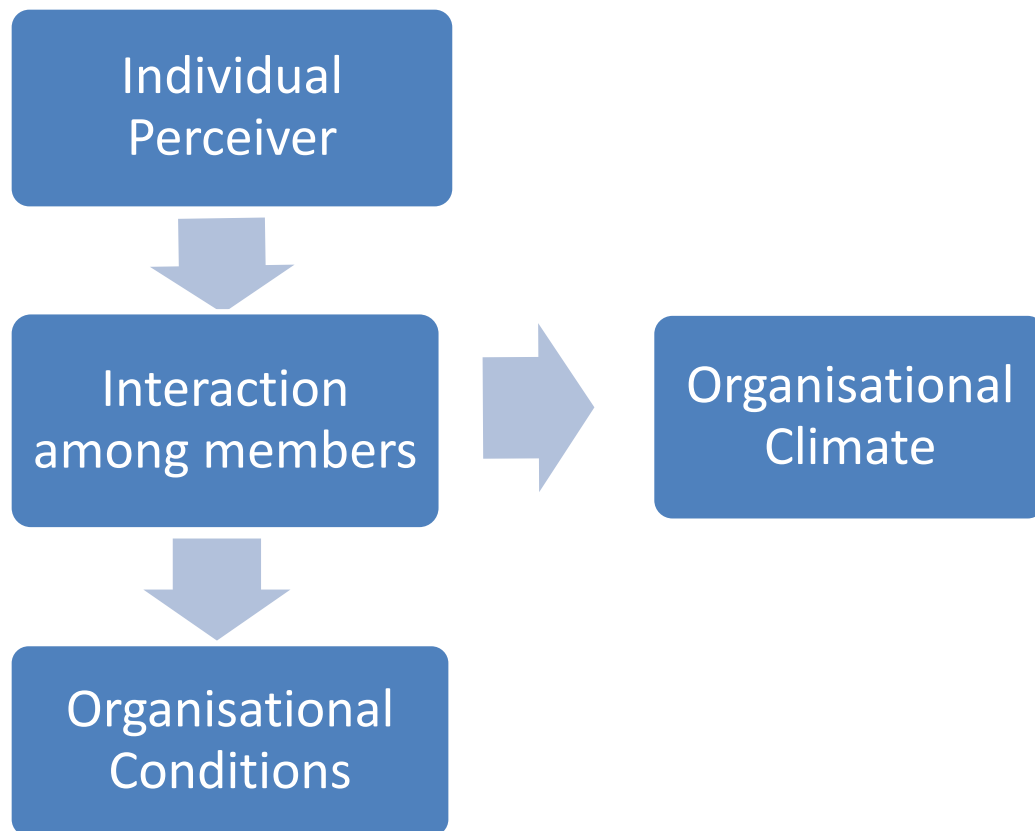
Figure 3.3. A visual representation of the interactive approach (Moran & Volkwein, 1992, p.28)

The interactive approach acknowledges that individuals develop shared perceptions of their setting, a common frame of reference, and contends that the meaning of this common frame of reference is not fixed in objective reality, but evolves from the interactions of individuals. Meaning is consequently described as "socially constructed" (Ashforth, 1985). According to Moran and Volkwein (1992), two sources, namely intersubjectivity and symbolic interactionism explain this approach. The first source, namely intersubjectivity, is derived from the phenomenology of the German philosopher Edmund Husserl, while the second source is based on the work of the American Philosopher, George Mead.

What the interactive approach fails to fully provide is an explanation of the way in which the social context shapes the interaction. Employee interactions are highly constrained and regulated by the prior and deeper meanings of the organisation's culture as manifested by such elements as norms, values and myths in the organisation (Moran & Volkwein, 1992).

3.5.4. Cultural Approach

The final approach is referred to as the cultural approach and focusses on the way groups interpret, construct and negotiate reality through the creation of an organisational culture (Mumby, 1988). The cultural approach does not focus on the formal properties of organisations, nor on the subjective psychological characteristics of the individual, but on how an individual combines these two approaches (Castro and Martins, 2011). The cultural approach moves from the primarily psychological focus inherent in the interactive approach towards a more sociological approach. This approach supplements a conceptual orientation which is more than a set of cultural variables, than simply adding to the interactive approach (Moran & Volkwein, 1992).
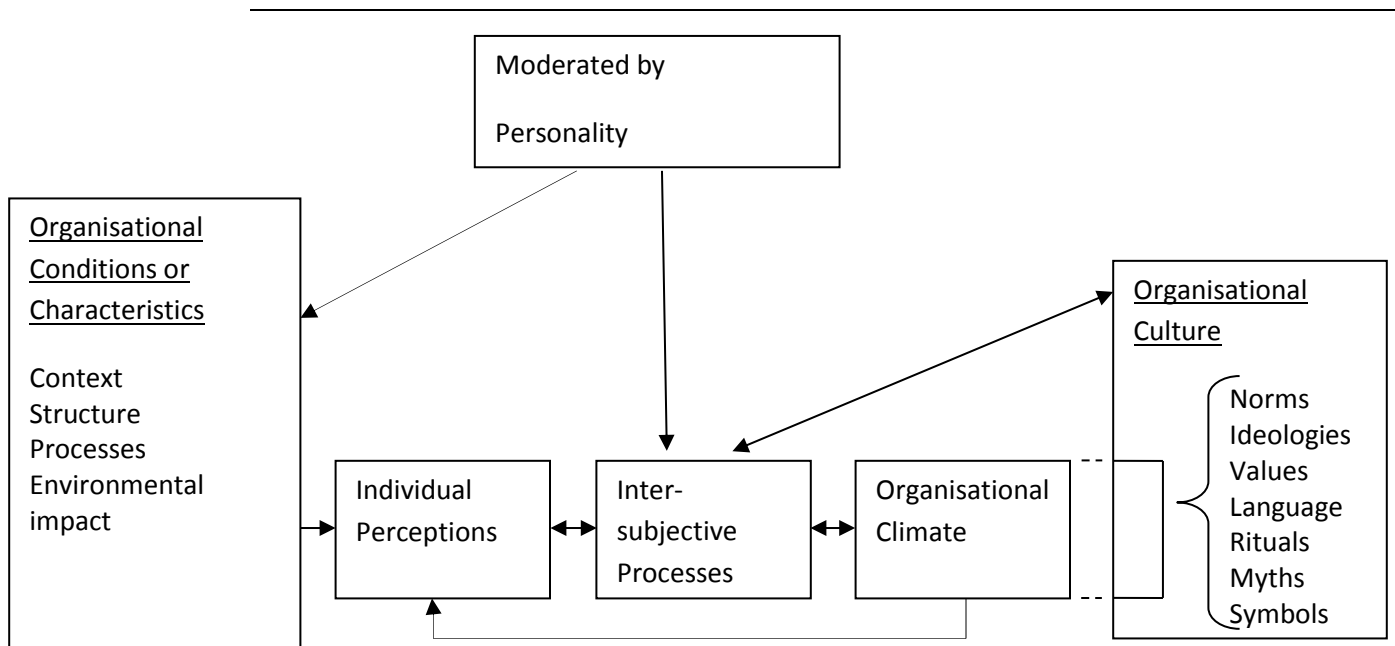
Figure 3.4. The cultural approach to organisational climate (Moran & Volkwein, 1992, p.32)

As observed in Figure 3.4., the origin of climate according to the cultural approach shifts the focus away from the individual perception as a source of climate formulation and emphasises the interaction of the organisation's employees. However, the cultural approach also underscores the critical role that the organisation's culture plays in shaping processes that produce organisational climate (Moran & Volkwein, 1992).

Understanding the determinants of climate is critical to clarifying climate constructs, since the determinants are an integral part of the nomological network and provide a deeper comprehension of the concept and can lead to further conceptual and methodological progress (Glick, 1985; Moran & Volkwein, 1992; Schneider & Reichers, 1983). Previous attempts in understanding the determinants of climate employed individual level analyses, thereby emphasising psychological processes and

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perpetuating the confusion over the appropriate units of theory in climate (Glick, 1985). Although there is a lack of understanding of how climates emerge or are formed in organisations, in order to understand the construct and to facilitate further conceptual and methodological progress, it is necessary to explore the etiology of climates (Moran & Volkwein, 1992; Schneider & Reichers, 1983).

3.6. FACTORS AFFECTING ORGANISATIONAL CLIMATE

Based on the definitions of organisational climate it appears as though organisational climate can be seen as an all-encompassing concept that could be regarded as a result of all the elements contained in the job context environment (Gerber, Nel & van Dyk, 1999). A number of organisational factors are potentially relevant contributors to organisational climate as the nature of the climate of an organisation is determined by a variety of internal and external factors with several researchers contributing to the understanding of the determinants of climate (Glick, 1985; Lindell & Brandt, 2000).

The differing views on the formation of climate occur as a result of divergent opinions about human nature and the correct means of conducting social science research, and from different assumptions about first causes and the role of time in conceptualising climates (Schneider & Reichers, 1983). Earlier researchers attempted to explicate these determinants through employing individual level analysis, thereby emphasising the psychological processes and perpetuating the confusion over the appropriate units of theory (Glick, 1985).

The structuralist approach, as discussed previously, places the meaning that individuals attach to events, practices and procedures primarily within the events themselves and climates differ from organisation to organisation according to this approach, as a function of the differences in organisational structures, while the interactionist approach

places the locus of meanings that arise within the interaction between people. The interactionist approach places primary importance on the interactions that occur during the new employees' socialisation period and emphasises the importance of group membership as a determinant on climate (Schneider & Reichers, 1983). Once employees discover what the organisation's priorities are they set their own priorities accordingly and these perceptions help employees to discover how and where they should focus their energies and competencies. This is a major determinant in creating an organisational climate (Schneider, 1975). Critical elements of organisational climate are an individual's perceptions of the organisation and it is these perceptions which govern an employee's behaviour (Campbell et al., 1970). Organisational climate exists in the perceptions that individuals have of their organisational environment and, in forming organisational climate perceptions, the employee acts as an information processor, using inputs from the objective events and the characteristics of the perceiver (Schneider, 1975). Global perceptions of the organisation appear as a result of a number of activities, interactions, reactions and frequent experiences the employee has with the organisation (Johns, 1992; Schneider, 1975).

Patterson. Warr and West (2004) and Schneider and Reichers (1983) recognised the following three sources to climate development: common exposure of employees to the same objective structural characteristics; selection, attraction and attrition of organisational members, resulting in a homogeneous set of members, and social interaction leading to shared meaning. A similar recent view is reported by Lindell and Whitney, as cited in Lindell and Brandt (2000), who state that climate is related to internal structural variables (size, staffing and resources) and external contextual variables (community support and integration into organisational networks) and that climate is formed from the type of individuals attracted, selected and retained by an organisation; its work processes, physical layout and methods of communication; the shared values and norms of employees; the exercise of authority, and the history of internal and external struggles (Lindell & Brandt, 2000).

Field and Abelson (1982) identify three main classes of variables that influence organisational climate:

- External influences of the physical and socio-cultural environments affect the climate of an organisation both directly and through the effects of the organisation.
- Organisational variables also affect climate directly through the actions of employees.
- The third class of variables affecting climate is the individual influences of employees.

3.6.1. External Factors Affecting Organisational Climate

External influences that may affect the climate of the organisation include, rising educational levels of employees, diversity of the workforce, technological advances, union contracts, government regulations and attractiveness of non-work.

3.6.1.1. Rising educational levels

As the educational level of present and future employees increases, so the expectations of these employees for satisfying and fulfilling work increases. Jobs are gradually re-designed to meet these expectations; the internal environment of an organisation shows a corresponding shift toward an increased atmosphere of professionalism (DuBrin, 1984).

3.6.1.2. Diversity of the work force

Organisational climate has shifted as more women and previously disadvantaged individuals have entered into professional and managerial jobs within organisations

(Bendix, 1996). The internal environment of an organisation in which one cultural group occupies virtually all the management-level jobs, has a climate different from that of a more diverse organisation (DuBrin, 1984).

3.6.1.3. Technological advances

Technological advances affect the organisational climate of an organisation both positively through perceptions such as modern, exciting, dynamic, and negatively, such as dehumanising, sterile and impersonal (DuBrin, 1984).

3.6.1.4. Union contracts

Among the various provisions of union contracts that influence organisations are those dealing with rewards systems and job design. A union that supports and encourages merit pay and job enrichment contributes more to a distinctive organisational climate than a union that impedes these practices (DuBrin, 1984). Another factor affecting the organisational climate is the organisation's treatment of unions. One organisation may establish a relatively agreeable relationship with a union, while another may persistently disapprove of unions as a matter of principle (Bendix, 1996).

3.6.1.5. Government regulations

Regulations imposed by government on organisations tend to decrease the organisations' options; each major regulation has a different influence on climate (DuBrin, 1984). Legislation may be put in place for the peaceful resolution of conflict between parties, delimit the rights of both parties and attempt to correct perceived imbalances, which exist (Bendix, 1996). Laws about employment discrimination, safety and health and product liability all have their own impact on climate (DuBrin, 1984).

3.6.1.6. Attractiveness of non-work

It may prove to be more difficult to motivate some employees on the job, as societal values towards educational and recreational activities increase. As their passion for non-work increases, they become less passionate about job performance. Organisations would need to bolster the potency of their reinforcers or offer more-non-work related rewards for good performance. A firm with many leisure-orientated employees will thus have a climate different from an organisation with a higher proportion of work-orientated employees (DuBrin, 1984).

3.6.2. Organisational Factors Affecting Organisational Climate

The second main class of variables that influence organisational climate include economic conditions, leadership style, organisational policies, managerial values and structure, characteristics of members, nature of business, organisational size and life stage.

3.6.1.1. Economic conditions

Different climates develop according to the organisation's position in the economic cycle. In times of prosperity, organisations tend to be more adventurous, money is available and organisations tend to risk new ventures and new programmes. Conversely, tight budgets contribute to an atmosphere of caution and conservatism within an organisation. Few managers are willing to suggest new programmes of potential merit when authorisation from senior management calls for tight control over expenses (DuBrin, 1984).

3.6.2.2. Leadership style

A key influence on climate is the leadership style in an organisation (DuBrin, 1984). Sekaran (2000) identifies three forms of leadership styles, namely autocratic leadership, democratic leadership and laissez-faire leadership, and according to Shanker and Sayeed (2012), the perceptions of employees in terms of the organisational climate are directly influenced by leaders due mainly to their involvement. Hence, according to Shanker and Sayeed (2012) leaders need to understand organisational climate to bring about change in organisations.

3.5.2.3. Organisational policies

Specific organisational policies can influence organisational climate. Policies specify a particular and specific behaviour, enabling individuals to exercise discretion within a limited confine. Employees acquire an organisation's implied policies by observing and imitating the actions of co-employees (Robbins, 1990).

3.5.2.4. Managerial values

Values held by executives have a deep-seated influence on organisational climate since values lead to action and shape decisions (Ghosh, 2008). Values lead to perceptions of the organisation such as paternalistic, informal, formal, impersonal, hostile or friendly (DuBrin, 1984) and influence behavioural choices as individuals are motivated to act in a manner that is consistent with those things that are valued (Grojean et al., 2004).

3.5.2.5. Organisational structure

The design or structure of an organisation influences the perception of its internal environment, and plays a role in the motivation of employees (DuBrin, 1984). Organisational structure determines how tasks are to be allocated, who reports to whom and the formal coordinating mechanisms and interaction patterns that will be pursued (Robbins, 1990). Organisational structure is the perception of the employees in relation to the number of rules, regulations and procedures and the prominence of officious red tape in contrast to a more informal atmosphere (Dippenaar & Roodt, 1996).

3.5.2.6. Characteristics of members

An organisation's climate can be influenced by the personal characteristics of its employees. Organisations with a high proportion of older, less educated and less upwardly mobile members will have a climate different from an organisation with many younger, well educated and ambitious members (DuBrin, 1984). A study conducted by Herchberger, Lichtenstein and Knox (1994) examined heredity and human development as factors in creating an organisational climate. They utilised the Work Environmental Scale (WES) to evaluate perceptions of organisational climate and deduced that there were no genetic predictors for job satisfaction.

3.5.2.7. Nature of business

An organisation's basic mission or basic business is an influential determinant of organisational climate. The nature of the business is not an isolated variable; it influences many other organisational characteristics such as policies, leadership style and characteristics of employees (DuBrin, 1984).

3.5.2.8. Organisational size

Even if an organisation produces the same goods or service, the size of the organisation has an effect on its organisational climate (DuBrin, 1984). Research has shown that organisational size is related positively to specialisation, formalisation and vertical span, and negatively to centralisation of the organisation (Robbins, 1990). Further research has proven that larger organisations have more rules, more documentation, are more specialised, and have greater decentralisation of decision making at a greater distance down the organisation's hierarchy (Robbins, 1990).

3.5.2.9. Organisational life stage

An organisation's position in its life cycle has an effect on its organisational climate. Newly created organisations tend to be less formal and smaller, while mature organisations tend to be larger and more formal (DuBrin, 1984). The organisation must have the ability to adapt during different points in the organisation life stage (Kolb et al., 1979).

3.6.3. Individual Factors Affecting Organisational Climate

The third main class of variables affecting organisational climate is the individual within the organisation. Individuals in organisations encounter thousands of events, practices and procedures and they perceive these events in related sets, attaching meaning to, and making sense of, clusters of psychologically related events (Schneider & Reichers, 1983). Schneider and Reichers (1983) argue that climate emerges from the interactions that members of a work group have with each other and that climate originates from 1) the establishment of a situational identity in the workplace; 2) the changes that occur in newcomers social selves in response to the disconfirmation of many naïve expectations about organisational life; 3) the sense making activities that newcomers engage in an

attempt to organise the many new stimuli they are exposed to into some personally meaningful structure, and 4) the importance of social roles and group assimilation processes (Schneider & Reichers, 1983, p.31).

3.7. DIMENSIONS OF ORGANISATIONAL CLIMATE

One of the more persistent problems regarding organisational climate is the specification of appropriate dimensions of organisational climate, as many measures of organisational climate were developed during the 1960s and 1970s (Glick, 1985; Nicholson, Schuler & Van de Ven, 1995). Further changes in organisations continue to direct the developments of new dimensions (Nicholson, Schuler & Van de Ven, 1995).

Patterson, West, Shackleton, Dawson, Lawthom, Maitlis, Robinson and Wallace (2005) postulate that, despite the general agreement on the definition of organisational climate, there is disagreement among researchers about which dimensions constitute the concept, as the initial assumption of theory and research within the climate domain was that social environments could be characterised by a limited number of dimensions. Steers (1977) provides the following reasons to explain why this is the case: Firstly, organisational climate has been researched in diverse situations, such as businesses, schools, laboratories and government, making it difficult to determine key dimensions that are relevant to all the above environments. Secondly, further new scales are constantly being developed without consideration as to how these compare to existing scales of organisational climate, resulting in an increase in scales claiming to measure organisational climate. Litwin and Stringer (1968) purport that dimensions are subjective and perceptive in nature; hence there may be a variety of organisational climate dimensions differing from organisation to organisation.

Litwin and Stringer (1968) developed an organisational climate questionnaire to measure organisational members perception on six different dimensions:

- Structure: Perception of the extent of organisational rules and regulations.
- Individual responsibility: Feelings of autonomy amongst employees.
- Rewards: Feelings related to being confident of adequate and appropriate rewards, praise, recognition for doing a job well.
- Risk and risk taking: Perceptions of the degree of challenge and risk in the work situation.
- Warmth and support: Feelings of good fellowship and helpfulness existing in a work setting.
- Tolerance and conflict: Degree of confidence that that climate can tolerate various opinions.

Despite the fact that these dimensions proved to distinguish between organisational subunits and have been incorporated into a number of experimental studies (Steers & Porter, 1979), Dippenaar and Roodt (1996) investigated the applicability of Litwin and Stringer's dimensions in the South African environment and discovered that only two factors of organisational climate were evident, namely motivational-relationship considerations and uncertainty-job ownership considerations.

A broader and more systematic study of climate dimensions was conducted by Schneider and Bartlet and six organisational climate dimensions emerged from this study (Steers & Porter, 1979).

- Managerial support: Managerial support is the active interest managers take in the progress of their employees in maintaining a spirit of friendly co-operation.
- Managerial structure: Managers require their employees to adhere to budgets and produce new customers.

- Concern for employees: Most of the items in the questionnaire are concerned with selection, orientation and training of new employees.

- Employee independence: These items describe employees who tend to run their own businesses and do not pay attention to management.

- Intra-agency conflict: The presence of in-groups or out-groups within the organisation and the undercutting of managerial authority by the employees.

- General satisfaction: Refers to the extent to which the employer sponsors periodic social get-togethers and the employees express satisfaction with various management and employee activities (Steers & Porter, 1979).

The organisational climate dimensions derived in the above two efforts, however, were inadequate to generalise across the perceptions of all individuals in the organisation (Steers & Porter, 1979). Nash (1983) identified eight organisational dimensions of organisational climate. High and low scores achieved on the given factor for the eight dimensions on the questionnaire have specific implications for the organisation.

- Organisational clarity: Is the understanding of the organisation's goals and plans by the employees. When the employees perceive the company's mission, processes, objectives and activities as a purposeful, rational and this is fully communicated (Nash, 1983). In this type of setting, employees experience these characteristics as unifying experiences that enhance cooperation. Organisational clarity is enhanced by the use of planning and goal setting to provide a clear context for performance (Nash, 1983).

- Decision making structure: Measures the nature and flow of information through an organisation. Decision making refers to the process of rationally selecting a course of action from a group of alternatives and then implementing and analytically evaluating that choice (Nash, 1983).

- Organisational integration: This is the extent to which various subunits cooperate and communicate to achieve an organisational objective is referred to as organisational integration (Nash, 1983).

- Management style: The pattern of delegated authority throughout a company and employees perceptions of constraints and freedom is known as management style. Management style measures the degree to which employees feel encouraged to use their own initiative and to question authority and how much collaboration they sense from higher levels of management (Nash, 1983).

- Performance orientation: Performance orientation is the degree of importance placed on the accountability for clearly defined end results and high levels of accomplishment (Nash, 1983).

- Organisational vitality: This dimension refers to the way in which employees see the organisation as dynamic and responsive to change, with innovative decisions and venturesome goals (Nash, 1983).

- Compensation: Compensation refers to the acuity about rewards available and how they are perceived. Are the rewards seen as equitable, competitive and related to performance (Nash, 1983).

- Human resource development: This is the extent to which employees perceive opportunities within an organisation and the extent to which employees can develop to their full potential (Nash, 1983).

A more recent study was conducted by Koys and DeCotis (1991), who initially identified 80 independent dimensions in their review of organisational climate. The initial dimensions were reduced to 61, as all dimensions had to be a measurement of perception that describes activities, but does not evaluate these activities and, finally, may not be an aspect of organisational or task structure (Koys & DeCotis, 1991). The existing dimensions were re-evaluated in terms of the way in which they were compiled in existing underlying groups, resulting in 45 of the original dimensions being retained (Koys & De Cotis, 1991). A circle of comparison can be drawn around these remaining 45 dimensions in order to introduce general concepts, and through a process of

elimination 8 dimensions of organisational (psychological) climate emerged (Koys & De Cotis, 1991).

- Autonomy: The individual's freedom to exercise responsibility, independence, and initiative as well as their self-determination with respect to work procedures, goals and priorities, is referred to as autonomy (Greenberg & Baron, 2000; Koys & DeCotis, 1991). A study conducted by Shadur, Kienzle and Rodwell (1999), using a sample of 269 employees of an information technology company, has found evidence that employee involvement practices create a strong organisational climate.

- Degree of structure: The degree of structure refers to the feeling that employees have about the constraints in a group, the rules, regulations and procedures there are, and also include whether there is an emphasis on red tape and bureaucracy. Organisational theorists concur that there is no consensus on what makes the term organisational structure. Theorists agree on the dimensions of organisational structure but disagree on any operational definitions of organisational structure and whether a dimension is primary or can be subsumed under any larger dimension (Robbins, 1990).

- Reward/Recognition: This is the degree to which the organisation rewards an individual for a job well done (James & Sells, 1981). In addition, rewards or recognition refer to the perceived equity of the recognition and advancement policy of the organisation (Dippenaar & Roodt, 1996).

- Trust: Trust is seen by individuals in the organisation as a freedom to communicate openly with members at higher organisational levels about sensitive or personal issues with in hope that the integrity of such sensitive issues will not be violated (Joyce & Slocum, 1984).

- Cohesion: Cohesion is the perception of togetherness and sharing within the organisational setting, including the willingness of members to provide material aid (Koys & DeCotis, 1991).

- Pressure: The way individuals perceive time demands in relation to task completion and performance standards is referred to as pressure (Koys & DeCotis, 1991).

- Warmth and Support: Warmth and support reflect the perception of tolerance of members by management, which includes the acceptance that employees learn from mistakes without fear of victimisation or reprisal (James & Sells, 1981). Support refers to the perceived assistance that management and other employees in the organisation offer each other, with the emphasis on an equitable exchange between management and employees (Dippenaar & Roodt, 1996).

- Fairness and innovation: If employees perceive organisational practices as equitable and unbiased, such perception is regarded as fair. When employees perceive that change and creativity are encouraged, as well as risk-taking initiated, this perception is regarded as innovation (Koys & DeCotis, 1991).

Over the years, the number of climate dimensions identified as targets of assessment have multiplied, which has led to confusion and slow theoretical progress (Patterson et al., 2005). Dippenaar and Roodt (1996) stress the point that the dimensions of organisational climate are not independent and, although the concept of climate denotes the internal characteristics of an organisation, climate is partially a product of the environment (Milton, 1981; Sherman & Bohlander, 1992). However, despite different researchers proposing different dimensions, the following dimensions regularly appear as independent proportions of organisational climate and suggest its content, as well as stressing that it is a multi-dimensional concept:

- interpersonal warmth and support;
- concern for conforming versus personal autonomy;
- concern for being progressive and innovative;
- punishing versus rewarding orientation and;
- concern for achievement (Nicholson, Schuler & Van de Ven, 1995).

A stance that emphasises the micro mode to study organisational climate is that of Locke, who deduced that when employees perceived an organisation, they looked primarily at four basic dimensions:

- clarity, harmony and justice;
- job challenge and autonomy;
- work facilitation, support and recognition, and
- warm and friendly social relations (Landy & Conte, 2010).

Conte (2010) further cites the work of James and McIntyre who independently conducted statistical analyses of existing climate research in 1996 and suggested similar dimensions to Locke's:

- role stress and lack of harmony;
- job challenge and autonomy;
- leadership facilitation and support;
- work group cooperation, friendliness and warmth.

Despite the benefits of the multi-dimensional approaches, both Glick (1985) and Schneider (1990, 2000) recommend steering clear of the use of general multidimensional measures of climate and argue for a facet-specific climate approach where climate has a focus and is tied to something of interest. Schneider (as cited in Patterson et al., 2005) suggests that the dimensions of organisational climate will vary depending on the rationale of the investigation and the measure of interest, and that general measures of climate will contain dimensions that are not significant for each specific study.

An alternative view is provided by Patterson et al. (2005), who states that rather than considering the global and specific-domain perspectives approaches to organisational climate as opposite sides of one coin, it is worthwhile viewing both as a valid basis for the investigation of work environment perceptions. Which approach is favoured depends largely on the interests of the researcher and researchers are encouraged to use climate dimensions that are likely to influence or be associated with the study's criteria of interest (Glick, 1985; Patterson et al., 2005). The global approach is advantageous in terms of providing an overall snapshot of organisational functioning, permitting an understanding of the modus operandi of the entire organisation, while a multidimensional global approach can also underscore subcultures and classify the effects of particular dimensions on specific outcome measures. The domain-specific approach interjects more specific and targeted information for use in areas such as safety and customer satisfaction (Patterson, 2005).

The shift toward strategic and process focus for research on climate brought to the fore the issue of levels of analysis in climate research (Schneider et al., 2011).

3.8. LEVELS OF CLIMATE

The primary issue is whether climate is an individual experience construct and/or one that assesses unit-organisational attributes (Schneider et al., 2011). Although early thinking about climate was at the unit or organisational level of analysis, early quantitative assessment attempts by psychologists trained in the design of measures of individual differences resulted in organisational climate research using individual respondents as the unit of analysis when the theory being used was often at the unit or organisational level of analysis (Schneider et al., 2011).

The appropriate unit of theory in climate research has been debated for a number of years, and at first the organisation was considered to be the natural unit of theory in organisational climate research (Glick, 1985). However, the subsequently made distinction between psychological and organisational climate implied that different units of theory (individual and organisational) are appropriate for the two constructs (Glick, 1985). The issue was that climate researchers were not clear about whether they were conceptualising organisational climate as an individual difference variable representing individual differences, or as an attribute of the setting being described via the perceptions of those in the setting (Schneider et al., 2011). Further, organisational climate is to some extent in the eye of the beholder, and it is complicated to secure a universally accepted measure of the various climate dimensions of a particular organisation because of the different perceptions held by employees (Steers & Porter, 1979).

If there was only one unit of theory in climate research there would be no reason to adopt different labels for organisational, sub-unit and psychological climate. Organisational climate denotes an organisational unit of theory, it does not specify the climate of an individual, workgroup, occupation, department or job. Researchers interested in other types of climates should adopt appropriate labels and units of theory (Glick, 1985). Therefore, in order to address the conceptual confusion produced by the use of multiple terms in climate research, it is necessary to define the level of climate theory (Parker, Baltes, Young, Huff, Altman, Lacost & Roberts, 2003). Based on the literature it appears as though organisational climate can exist on three different levels: aggregate, collective and psychological (Costas and Martin, 2010).

3.8.1. Aggregate Climate

Aggregate climate is an individual's perceptions, averaged at some formal hierarchical level (e.g. workgroup, department, division, plant and organisation). Aggregate climate

can be viewed as a frame of reference, which serves to help the individual interpret organisational experiences in order to react towards it in an appropriate manner (Verwey, 1990). Aggregated climates are constructed based on membership of individuals, in some identifiable unit of the formal organisation and within-unit agreement or consensus in perceptions (Cooper & Robertson, 1988). Aggregate climate is of importance to the organisation since it is on this level that climate changes from being a psychological phenomenon that represents the internal state of the individual, to being a collective phenomenon that is shared through social interaction (Verwey, 1990).

3.8.2. Collective Climate

Amalgamating the individual's perception of situational factors and combining these into clusters reflecting similar climate scores, characterise collective climate. Collective climates emerge from agreement between individuals regarding their perception of behavioural contexts. Collective climates are composites of individuals for whom situations have common stimulus values (Verwey, 1990). Situational and personal factors have been considered as predictors of cluster membership, but personal factors such as work experience, age, management, time in position, account for some clusters, while situational factors, functional area, location and shift account for others (Cooper & Robertson, 1988). In terms of collective, interactions are postulated to play a substantial role in determining shared perceptions (Cooper & Robertson, 1988).

3.8.3. Psychological Climate

According to Cooper and Robertson (1988), Psychological climate is essentially unaggregated individual perceptions of employees environment. It is a molar concept comprising a individual's cognitive representation of an organisation which is composed of the set of attitudes and beliefs that reflect each individual's perceptions of the prevalent values, norms and expectations in the organisational environment (Fink &

Chen, 1995; Parker et al., 2003; Schneider & Reichers, 1983). James, James and Asch (as cited in Stewart et al., 2011, p.582), define Psychological climate as employees' "cognitive appraisals of environmental attributes in terms of their acquired meaning and significance to the individual". Another definition is provided by Truhon (2007, p.153): "the variation in perceptions that are due to the individual". It is generally accepted that Psychological climate is a property of the individual and that the individual is the appropriate level of theory, measurement and analysis (James & Jones; Reichers & Schneider, Rosseau as cited in Parker et al., 2003)

Climate evolves from perceptual interaction between the individual and the situation and serves as an information source to the individual in the formulation of expectation, affective responses and instructional behaviour towards the organisational situation that is perceived (Verwey, 1990). An individual's perception of the Psychological climate enables individuals to interpret events, predict possible outcomes and gauge the appropriateness of their actions (Parler et al., 2003). Psychological climate therefore reflects how individuals organise their experiences of their environment shaped by, inter alia, individual thinking styles, cognitive processes, personality, culture and social interactions. Due to the fact that psychological climate represents an internal state of the individual, it is only of importance to the organisation once it becomes externalised in the form of behaviour (Verwey, 1990).

The group of which the individual is a member, the task the individual needs to perform, as well as the individual's personality, moderate the link between organisational and psychological climates. A cognitive map climate is then created from the individual's psychological map which serves to filter future incoming information and therefore has a feedback effect on the psychological climate of the member. Furthermore, a cognitive map allows individuals to construct expectations and instrumentalities, which are then related to the individual's job behaviour, including motivation, performance and

satisfaction. The ability and personality of the individual have an influence on these relationships (Field & Abelson, 1982).

Parker et al. (2003) and Stewart et al. (2011), states that there is limited agreement about the specific dimensions that comprise the psychological climate. Parker et al. (2003) conducted a survey of the psychological climate literature a discovered a large different number of dimensions that have been measured. Childre and Cryer (1988) propose six dimensions of a workplace's psychological climate:

- Supportive management: the extent to which individuals feel supported by their immediate manager.
- Clarity: the degree of clarity about what is expected of an individual.
- Contribution: the feeling that an individual's contribution is worthwhile.
- Recognition: the feeling that the individual's contribution is recognised and appreciated.
- Self-expression: feeling free to question the way things are done.
- Challenge: the feeling that the work is challenging.

Each of these is considered to be an indicator of how psychologically meaningful the employee perceives the organisational environment to be (Childre & Cryer, 1998). When employees perceive management as supportive and they feel free to express themselves; feel that they are making a meaningful contribution; are appropriately recognised for their contribution; perceive the work as challenging, and the work roles are well defined, then the employees will be motivated to exert greater effort in their jobs (Childre & Cryer, 1995).

Kopelman, Brief and Guzzo (as cited in Parker et al., 2003) suggest that the following five dimensions represent common elements of psychological climate: goal emphasis, means emphasis, reward orientation, task support and socio-emotional support.

Research on psychological climate has contributed to the understanding of relationships between ethical climate and employee attitudes (Wang and Hsieh, 2012). Ethical climate according to Schneider, as cited in Bourne and Snead (1999), refers to the psychological perceptions of employees towards the ethical procedures and policies of the organisation. Ethical climate encompasses the established norms, feelings, behaviour and attitudes of employees and is influenced amongst others by the organisation's policies, procedures and rewards systems (Barnett & Schubert, 2002; Schminke, 2007). Hence ethical climate is a similar but distinct form of psychological climate, and can be viewed as a subset of the more general concept of organisational climate and can serve as a useful framework for assessing the ethical characteristics of organisations (Schminke et al., 2007; Stewart, Volpone, Avery & McCay, 2011; Webber, 2007).

3.9. ETHICAL CLIMATE

Ethical climate can be viewed as a subset of the more general concept of organisational climate and can serve as a useful framework for assessing the ethical characteristics of organisations, and includes normative values and beliefs concerning moral issues that are shared by the employees of the organisation (Schminke et al., 2007; Webber, 2007; Van Aswegen & Engelbrecht, 2009). Victor and Cullen's influential research studied the link between organisational behaviour and corporate ethical standards (Forte, 2004) and defined ethical climate as the "the shared perceptions of what is ethically correct behaviour and how ethical issues should be handled" (Ambrose et al., 2007, p.325; Peterson, 2002, p.313; Victor & Cullen, 1988, p.135). Ethical climate can therefore be viewed as the perceptual lens through which individuals gauge situations with prospective ethical implications and ascertain a response (Parboteeah, Martin & Cullen, 2011).

Ethical climates in an organisation provide employees with shared behavioural perceptions of ethically correct actions and provide insights into the shared values (Biron, 2010; Erakovich, Bruce & Wyman, 2002). Among the various organisational climates that may be prevalent, ethical climate plays a pivotal role in developing the context in which employees operate (Trevino, Butterfield & Mcabe as cited in Tsai & Huang, 2008). Moreover, according to Agarwal and Malloy; Wyld and Jones; Key as cited in Erakovich et al. (2002), organisational climate is a normative construct of the shared behavioural perceptions of policies, procedures, systems and behaviours in an organisation that direct organisational members' ethical actions and decisions. These cumulative collections of shared practices and behavioural perceptions are observable and have an effect on employees in their ethical decision making processes (Erakovich et al., 2002). According to Erakovich et al. (2002) when employees are required to make a ethical decision and considers what the organisation's expectations are, the ethical climate provides the foundation for determining what is acceptable and ethical behaviour.

3.9.1. Difference between Ethical Work Climate and Ethical Work Culture

According to Key (1999), the two concepts, namely ethical work climate and ethical work culture, have at times been used interchangeably by scholars to describe ethical practices in organisations, with Appelbaum, Deguire and Lay (2005) stating that an organisation's ethical climate is part of its organisational culture, while Trevino, Butterfield and McCabe as cited in Key (1999) believe that ethical climate differs from ethical culture, as ethical climate is a normative construct, that serves as an instrument to measure organisational members' perceptions. Kaptein (2011) states that a study conducted by Trevino and her colleagues in 1998 to distinguish between ethical climate and culture, examined the literature review of definitions of organisational culture to define the ethical culture of an organisation as those aspects of the perceived organisational context that may impede unethical behaviour and encourage ethical behaviour. According to the above authors, ethical climate can be defined as the

perceptions of managers and employees about what constitutes ethical and unethical behaviour in the organisations (Kaptein, 2011). Ethical work climate, according to Schminke et al. (2007, p.175), encompasses the "established ethical values, norms, attitudes, feelings, and behaviours of employees".

3.9.2. Models of Approaches to Ethical Climate

Erben and Güneser (2008) state that a large portion of the ethical climate models previously researched imply that ethical climate is influenced by individual characteristics and environmental factors that include values, regulations, codes and organisational form, and organisational specific factors. Arnaud and Schminke (2007) provide a model that demonstrates the antecedents for an ethical work climate.
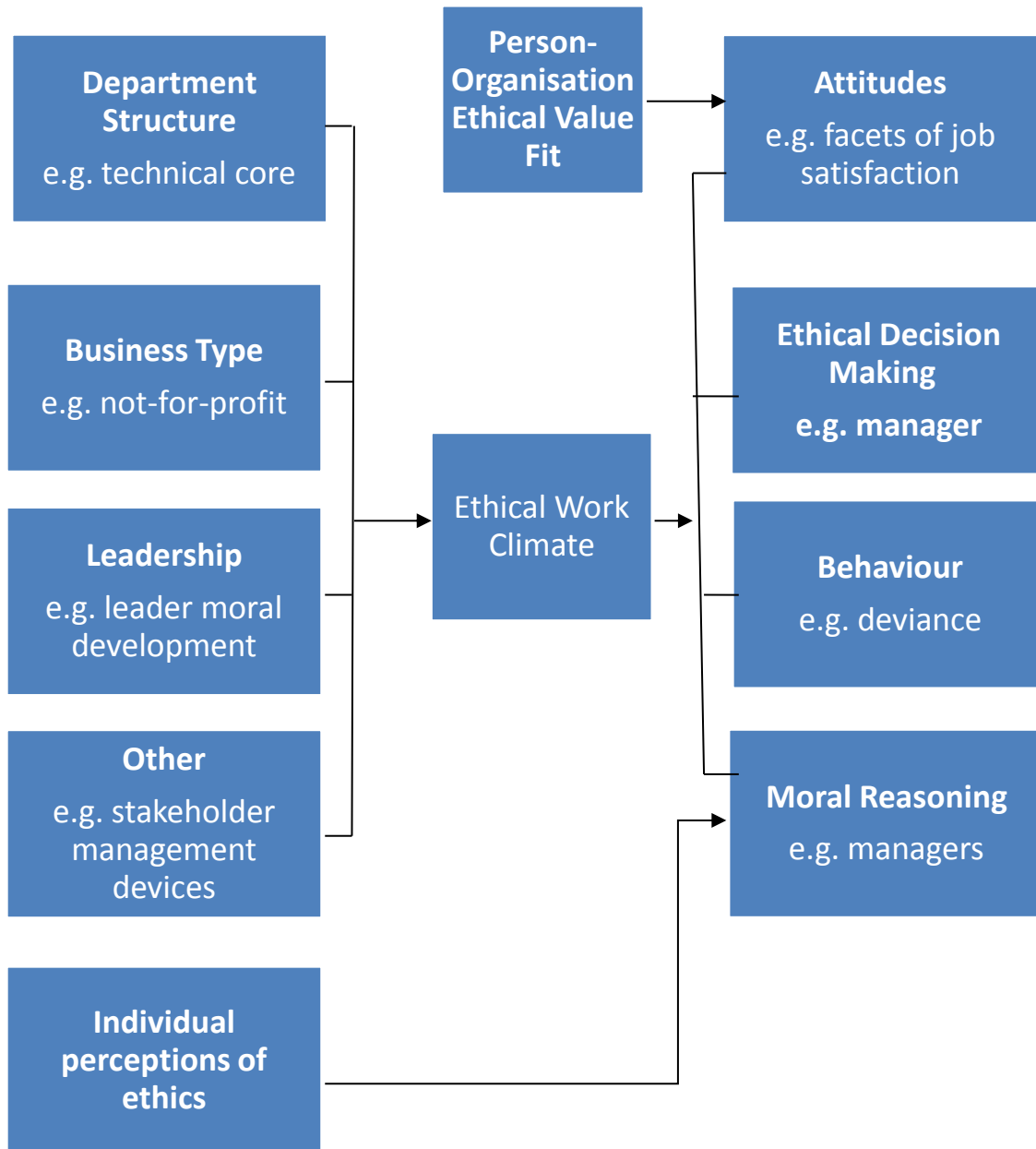
Figure 3.5. Ethical work climate: A comprehensive model (Arnaud & Schminke, 2007, p.192)

3.9.2.1. *Departmental structure*

According to Arnaud and Schminke (2007), a number of scholars have examined the role of determinants of Ethical Work Climate to the intra-organisation level, by examining the role of departmental structure and function in the development of Ethical Work Climate. Aiken, Michael and Hage and Odom, Boxx and Dunn, as cited in Erakovich et al. (2002), describe this variable as the organisation's procedures, specific chain of command, flow of work and orientation toward responsibility and attempt to acquire power.

3.9.2.2. Business types

Previous researchers have examined various perspectives on how organisational differences may have an effect on the development of an ethical work climate (Arnaud & Schminke, 2007).

3.9.2.3. Leadership

According to Dickson and Trevino, as stated in Erben and Güneser (2008), and Gortner; Hitt and Cooper as cited in Erakovich et al. (2002), leader behaviour is one of the most important organisation-specific factors affecting an organisation's ethical climate, with a large number of researchers amongst others, Aronson, Bass, Bass & Steidlmeier, Ciulla and Trevino, paying attention to how ethical climate and ethics are related (Arnaud & Schminke, 2007; Noor, Bhatti, Khan & Khan, 2011). When the organisation's ethical climate is not clear and positive, employees will often look to leaders for guidance to handle ethical dilemmas. Actions speak louder than words, and what the leader values and does will set the tone for ethical decision making at all levels and create a moral environment for the organisation (Van Aswegen & Engelbrecht, 2009).

According to Mayer et al. (2009), researchers have just commenced to examine how various leadership types affect the development of ethical work climates. Erakovich et al. (2002) states that research focussing on leadership tends to focus on two isolated dimensions of leadership behaviour, namely the consideration or supportive, and initiating or structural.

3.9.3. Impact of Ethical Work Climate

Schminke et al. (2007, p.179) provides a model that indicates the overall impact of having an ethical climate in organisations.

Figure 3.6. Overall impact of ethical climate (Schminke, Arnaud & Kuenzi, 2007, p.179)

This study will now proceed by briefly examining two approaches to ethical work climate, namely 1) The Moral Climate Continuum by Vidaver-Cohen, 2) Organisational Ethical Climate, by Schwepker, Ferrell and Ingram. According to Arnaud and Schminke (2007), each of the above-mentioned approaches provide important individual insights to the issue of ethical contexts. After highlighting the strengths and weaknesses of the above approaches, the study will move to a comprehensive discussion of Victor and Cullen's dominant stance. Based on the literature of Victor and Cullen, this study will

attempt to build a theoretical model to predict management fraud, as a specific form of unethical behaviour in the organisation.

3.9.4. Approaches to Ethical Climates

3.9.4.1. The moral climate continuum (MCC)

This approach by Vidaver-Cohen proposes that the ethical climate of the organisation can to some extent be favourable to ethical behaviour, depending on where the ethical climate falls along a "moral climate continuum" (Arnaud & Schminke, 2007; Cohen, 1995). At one end of the range lies the ethical climate, where organisational norms always promote ethical behaviour, while at the other end of scale the organisational norms never promote moral behaviour and therefore an unethical climate exists (Arnaud & Schminke, 2007).

The following five dimensions define the ethical climate according to this model: goal emphasis (prevailing norms for selecting organisational goals); means emphasis (prevailing norms for determining how organisational goals should be attained); reward orientation (prevailing norms regarding how performance is rewarded); task support (prevailing norms regarding how resources are allocated to perform specific tasks), and socio-emotional support (prevailing norms regarding the type of relationships expected in the organisation) (Arnaud & Schminke, 2007; Cohen, 1995).

Cohen (1995) further states that establishing a moral climate in an organisation requires an understanding the antecedents of moral climate in organisations, as a number of different organisational and environmental factors can affect an organisation's moral climate. According to Cohen (1995) the following three organisational processes are particularly important in determining a organisation's moral climate: 1) political

processes involve power distribution, strategy formulation and decision making; 2) technical processes include all the activities pertaining to production, and 3) cultural processes involve the creation of both formal and informal socialisation mechanisms to establish behavioural norms (Katz & Kahn, Tichy, as cited in Cohen, 1995). This approach assumes that these factors are interactive and continually influencing onean other over time (Cohen, 1995).

According to Arnaud and Schminke (2007), moral climate continuum approach has two critical shortcomings, although it seems to have face validity and is a conceptually interesting approach. The first shortcoming is that the theoretical conceptualisation of the continuum is challenging. Besides the two extreme points of the continuum, ethical and unethical climates, it is unclear what dimensions specifically characterise specific positions along the continuum. The second critical aspect of this approach is that the model has not been tested empirically and therefore remains in its preliminary stages of development.

3.9.4.2. Organisational ethical climate (OEC)

Schwepker, Ferrell and Ingram, as cited in Arnaud and Schminke (2007), describe organisational ethical climate (OEC) in terms of how organisations define their codes of ethics, corporate policies and reward and punishment system. These factors define the OEC according to Schwepker, Ferrell and Ingram as cited in Arnaud and Schminke (2007), as they strongly influence the ethical decision making of individuals,

According to Arnaud and Schminke (2007), the above-mentioned approaches each have the capacity to add some unique concept to the ethical contexts of organisations. However, each is subject to certain theoretical and/or empirical limitations, which have limited their general acceptance in the literature. As a result, Victor and Cullen's model

of ethical work climate remains the dominant framework for research in this domain and will be discussed in the next section.

3.9.5. Development of Victor and Cullen's ethical climate concept

According to Forte (2004) and Mayer, Kuenzi and Greenbaum (2009), Victor and Cullen can be viewed as the "fathers" of ethical climate as they researched the linkage between corporate ethical standards and organisational behaviour, and developed an instrument designed to measure perceptions of ethical climate by members of an organisation. Victor and Cullen utilised philosophical and sociological perspectives in developing a theoretical basis for creating a measurement for ethical climate (*Mayer* et al*.,* 2009). This instrument is one of the most widely investigated instruments for examining the ethical climate within organisations (Fritzsche as cited in Peterson, 2002; Martin & Cullen as cited in Mayer et al., 2009). According to Shacklock et al. (2011), Victor and Cullen obtained responses from 872 employees from four different organisations (a savings and loan company, a small printing company, a local telephone company and a manufacturing plant). Cullen and Victor postulated that, in an organisation, once employees learn how to behave through formal and informal socialisation (Cooper; Victor & Cullen as cited in Erakovich, 2002), employees learn which values are held in high self-esteem and which are rewarded and they react to it collectively (Appelbaum, Deguire & Lay, 2005).

Victor and Cullen developed a questionnaire to measure perceptions of ethical climate by members of the organisation, by extending Kohlberg's moral reasoning levels for individuals (Forte, 2004). They classified organisations based on ethical climate perceptions into the following five categories: Caring, Law and Code, Rule, Instrumental and Independence (Stewart et al., 2011). These researchers concluded that organisations have nine distinct ethical climate types and that these climate types influence managerial behaviour and influence what ethical conflicts are considered, and

the process by which the conflicts could be resolved (Forte, 2004). These different ethical types were based upon Victor and Cullen's belief that three factors determine ethical conduct in organisations: 1) the environment in which the organisation functions; 2) organisational form, and 3) the historical developments within the organisation (Bourne & Snead, 1999).

According to Grojean et al. (2004), Victor and Cullen's work has been influential in highlighting the point that organisations have a type of climate pertaining specifically to ethical issues. Ethical climate research conducted by Victor and Cullen has been well received in the business ethics literature, prompting over 70 empirical studies in the last 20 years (Mayer et al., 2009). Arnaud and Schminke (2007) supports the above authors by stating that Victor and Cullen's theory of Ethical work climate (EWC) has emerged as the major perspective both theoretically and empirically and that approximately 75% of all ethical climate research in the last 25 years was based on Victor and Cullen's research. According to Arnaud and Schminke et al. (2007), other researchers, including Trevino; Schwepker; Ferrell and Ingram; and Vidaver-Cohen, have offered alternative or complementary perspectives, but none of these has received the extensive attention in the literature gathered by Victor and Cullen.

Kohlberg, as cited in Barnett and Schubert (2002), stated that the conceptualisation of ethical work climate is based partially on the theory of moral development of Kohlberg, which suggests that individuals progress through stages of moral development that are consistent with three types of ethical standards: self-interest, caring and principle (See Section 2.7.1.2. for a comprehensive discussion of Kohlberg's theory). Essentially, according to Barnett and Schubert (2002), individuals make decisions to maximise own interest (egoism), maximise joint interest (utilitarianism) or to adhere to principles (deontology). Victor and Cullen defined ethical climate as "The predominant perceptions of organisational practices and procedures that have ethical base" (Erben & Güneser, 2008, p.958), while according to the above authors, Schneider defined it as: "... the

stable, psychologically meaningful perceptions which the members of an organisation hold concerning ethical procedures and policies existing in their organisation and departments (Erben & Güneser, 2008, p.958). Barnett and Vaicys, as cited in Erben and Güneser (2008), summarise the above by stating that an organisation's ethical climate is affected by its normative systems that include policies, practices, procedures and reward systems. Victor and Cullen (1988) imply that the ethical climate constitutes the perceptions of these normative systems that include organisational practices and procedures.

Victor and Cullen based their theory on the assumption that employees' perceptions of ethical events, ethical practices and ethical procedures depend on two dimensions, namely ethical criteria and loci of analysis (Appelbaum et al., 2005). Based on sociological theories of roles and reference groups, Victor and Cullen state that organisation members will also recognise that the ethical climate of the organisation dictates the appropriate "loci of analysis" for ethical issues, and that this will either be at the individual, organisational (local) or societal (cosmopolitan) level (Barnett & Schubert, 2002). (See Figure 3.7).

	Individual	Local	Cosmopolitan
Egoism	Self-interest	Company profit	Efficiency
Benevolence	Friendship	Team interest	Social responsibility
Principle	Personal morality	Company rules and procedures	Laws and professional codes

ETHICAL CRITERION

Figure 3.7. Theoretical ethical climate types (Victor & Cullen, 1988, p.120)

3.9.6. Types of Ethical Climates

According to Peterson as cited in Deshpande, Joseph and Shu (2011), a number of researchers have attempted to investigate how many ethical climates exist in organisations.

Victor and Cullen (1988) utilised a two-dimensional theoretical typology of ethical climates to develop a three by three matrix through cross-tabulation of the ethical criteria and loci of analysis dimensions. The model includes nine cells, each representing a different ethical climate type, which include self-interest, company profit,

efficiency, friendship, team interest, social responsibility, personal morality, company rules/procedures and laws/professional codes (Ambrose et al., 2007; Tseng & Fan, 2011; Victor & Cullen, 1988). These nine ethical climates were based upon the belief that three factors determine corporate ethical climate: 1) the environment in which the firm operates; 2) organisational form; 3) the historical developments within the organisation (Bourne & Snead, 1999).

The first dimension represents the ethical criteria used for organisational decision making (Victor & Cullen, 1988). This dimension is reflected by three possible levels used for ethical decision making (See Y-Axis on Figure 3.7.) and is based on Kohlberg's three levels of cognitive moral development. Victor and Cullen labelled these levels egoism (Kohlberg's pre-conventional level); benevolence (Kohlberg's conventional level), and principled (Kohlberg's post conventional level) (Ambrose et al., 2007; Tseng & Fan, 2011). Victor and Cullen (1988), emphasise the aspect that climate is an organisational or group aspect and therefore is not assumed to follow the developmental sequence that is hypothesised by Kohlberg's individual moral development. According to Victor and Cullen (1988), individual behavioural compliance with a group or organisational climate incongruent with an individual's level of moral development may lead to adaptive reactions such as stress and whistle-blowing. A number of previous researchers who have studied individual ethical reasoning including, amongst others Kohlberg; Gilligan; Haan, Aerts and Cooper, as cited in Victor and Cullen (1998), state that types of ethical reasoning are relatively incompatible. Individuals who are benevolent tend to be less aware of laws or rules and may be less open to arguments employing rules or principles. In contrast, individuals who are principled tend to be less sensitive to particular effects on others. Based on the above, subgroups within organisations may develop relatively distinct forms of ethical climates or a number of different climates, although Victor and Cullen (1988) found that organisations often have a dominant climate type.

The second dimension which is represented on the Y-Axis of the Figure, is labelled loci of analysis and distinguishes three possible referents in ethical decision making, namely the self, the organisation and society at large. This dimension is used for applying ethical criteria to organisational decisions and/or limits to what is considered in ethical analyses of organisational decisions (Victor & Cullen, 1988). Victor and Cullen labelled these loci of analysis: individual (focus on one-self), local (focus on organisation and peers) and cosmopolitan (focus on society and humanity in general) (Ambrose et al., 2007; Tseng & Fan, 2011).

3.9.7. Previous Research on Ethical Climate

According to Key (1999), Victor and Cullen's multi-dimensional approach provides a rich description of organisational ethical systems. While each of these three elements combine to form the foundation for an organisation's ethical climate, each needs to be individually examined to ascertain its relative impact (Bourne & Snead, 1999). Key (1999) further implies that this approach does not answer the fundamental question of how ethical an organisation's practices are. According to Cullen and Bronson; Lemke and Victor and Cullen, as stated in Key (1999), five of the original nine dimensions have been demonstrated empirically, while two more recent studies utilised the most recent version of the Ethical Climate questionnaire (EC Q) to examine the relationship between the ethical climate dimension and ethical behaviour of employees (Peterson, 2002). Both these studies first performed a factor analysis on the data obtained from the EC Q and then the dimensions were used to examine the relationship between the ethical climate dimensions and a measure of ethical belief or behaviour (Peterson, 2002). Through factor analysis the first study conducted by Wimbush identified five dimensions: 1) Caring, 2) Laws and Rules; 3) Service; 4) Independence; 5) Instrumental, that were weakly related to ethical behaviour, with only half (50%) of the relationships statistically significant (Peterson, 2002).

The second study conducted by Trevino provided a more encouraging result and reported a moderate to strong and statistically significant relationships between the first five dimensions and observed unethical behaviour. In addition, this study using factor analysis on the data obtained from the EC Q, identified seven dimensions, namely: 1) Laws and professional codes; 2) Rules; 3) Employee focus; 4) Community focus; 5) Self-interest; 6) Personal ethics; 7) Efficiency (Peterson, 2002).

According to Peterson (2002) there are a number of differences between the above-mentioned studies that could account for the reported differences in the strength of the relationship between the dimensions and ethical behaviour. One potential explanation, according to Peterson (2002), is the manner in which the dependent variable, namely ethical behaviour, was assessed. In the second mentioned study a measure of ethical behaviour was obtained by combining the responses on twenty Likert-scale items representing observed unethical behaviour among other employees. In the other mentioned study four vignettes were used to determine self reported ethical behaviour. Respondents were presented with ethical dilemmas involving 1) stealing; 2) lying; 3) disobeying company rules, 4) and being an accomplice. Respondents were requested to respond in each situation by answering three yes or no questions (Peterson, 2002).

Peterson (2002) states that it is expected that the dimensions of the EC Q would be highly predictive of certain types of unethical behaviour, specifically if the unethical behaviour is related to one of the dimensions, but the EC Q is not necessarily predictive for all unethical behaviours. Peterson (2002) further implies that, based on the results of previous studies, a number of researchers have recommended that the most recent version of the EC Q may require substantial revisions, while the findings of the study conducted by Peterson (2002) supports the logic behind the original nine-dimension model.

Murphy et al. (2011) argue that the egoist/individual and egoist/local climate represent the climates in which fraud is most likely to occur, although they provide the clarification that they are not aware of any research directly linking a particular ethical climate to fraudulent behaviour. According to Mayer et al. (2009), even though Victor and Cullen's initial conceptualisation and operationalisation of ethical climate was beneficial in initiating interest in the ethical climate topic, a number of changes are now necessary for ethical climate research to continue to prosper and to become a mainstream management topic.

3.10. SUMMARY

This chapter commenced by examining the historical context of organisational climate, before conceptualising organisational climate. Due to the conceptual complexity of this construct, this study firstly examined the nature and formation of this multi-level construct, before distinguishing organisational climate from culture. The different types and classification of climates were examined, before the factors affecting organisational climate were studied.

This chapter then established the link between organisational climate and ethical climate and focused on a specific level of organisational climate namely ethical climate. The difference between ethical climate and culture were examined, before discussing two models: the first model distinguished the antecedents of an ethical climate, while the second model indicated the overall impact of having an ethical climate. The strengths and weaknesses of various approaches to ethical climate as well as the different types of ethical climates were studied.

CHAPTER 4: COMPILING A CONCEPTUAL MANAGEMENT FRAUD CLIMATE MODEL

4.1. INTRODUCTION

In this chapter, the initial conceptual management fraud climate model is presented, by applying the first five steps of Dubin's methodology. After the concepts have been conceptualised, they are linked to one another through a hypothetical contingency table. The study then explores the rationale for the hypothetical values as assigned in the contingency table by examining the link between the various climate determinants and dimensions and management fraud.

4.2. APPLYING DUBIN'S METHODOLOGY TO THIS STUDY

This section describes the development of the theory on management fraud climate using an adapted methodology as proposed by Dubin (1969; 1978). The first part incorporated the five-step process as recommended by Dubin's model. The first five steps were followed in a structured sequence, as this allowed a conceptual theory to develop from the relevant literature. According to Lynham (2002), the core purpose of this phase is to develop an initial conceptual framework that provides an initial understanding and explanation of the nature and dynamics of the phenomenon under investigation. The intended outcome of this stage according to Dubin (1978) and Lynham (2002), is an explicit, informed conceptual framework that takes the form of a model and is developed from the theorist's knowledge of and experience with the phenomenon concerned.

Following the traditional approach in this study as recommended by Dubin (1978); Breakwell and Rose (2002) and Shoemaker et al. (2004), the first step was to describe

the phenomenon systematically and thoroughly. According to Breakwell and Rose (2002), the next step was to categorise the phenomenon, to indicate how specific instances are characterised by common attributes which make them capable of being treated in some sense as equivalent to each other. Berg (2009) and Shoemaker et al. (2004) emphasises the above point that, in order to construct theories, a researcher needs some smaller components or concepts. Berg (2009, p.20) and Shoemaker et al. (2004, p.15) refers to the comment of Jonathan Turner who regards the nature of concepts as the "basic building blocks of theory". Berg (2009, p.20) defines concepts as "the symbolic or abstract elements representing objects, properties, or features of objects, processes or phenomenon". These concepts are formed, according to Miles and Huberman (1994), not only from theory and experience, but also from the general objective of the study. Therefore, following the advice of Berg (2009) and McTavish and Loether (2002), this study will first aim to define relevant concepts by examining the literature. Precise definitions of the concepts are required as unclear or vague definitions of concepts create obstacles to the advancement of knowledge and science, as concepts rarely occur in isolation (McTacish & Loether, 2002; Sommer & Sommer, 2002). In terms of this study, concise definitions of management fraud and organisational climate were conceptualised in chapters 2 and 3 respectively.

These concepts were then connected to each other in the propositions which are stated in chapter 4. Hypothesising plays an important role in this process, as the theory and empirical research are connected by means of hypotheses. Hypotheses represent testable propositions that are logically derived from theories (Sommer & Sommer, 2002). According to McTavish & Loether (2002) these propositions have two segments: how the concept is similar to other concepts and how it is different from them. The literature will be used in this study to make assumptions about the interconnectedness of management fraud and organisational climate and to compile a theoretical model.

The second part of the process digressed from Dubin's (1969; 1978) empirical validation section and utilised analytical induction and Lawshe's content validity method to validate the conceptualised theory. The first five steps of Dubin's methodology: Theory Development as applied to this study, will be discussed in the following section.

4.2.1. Units of a Management Fraud Climate Theory: Concepts

In line with Dubin's theory (1978) and the advice of Ardichvili et al. (2003); Jaccard and Jacoby (2010), this study conducted an extensive literature review on management fraud and organisational climate. The review of the literature indicates several related concepts that correspond and may overlap and interact with one another. These concepts will now be examined in the next section.

4.2.1.1. Units of the management fraud climate theory: management fraud

A common characteristic of management fraud is that it usually includes a number of individuals involved in the fraud and that the breeding ground for this type of fraud has two general characteristics: overly aggressive targets for financial performance and a can-do organisational culture that does not tolerate poor performance (Sweeney, 2003).

Albrecht et al. (2009); Hemraj (2004); Jayalakshmy, Seetharaman and Khong, as cited in Pathak and Wells (2008) and Tickner (2010), emphasise the collusive aspect of fraud and state that a significant proportion of management fraud is committed by more than one person, requiring co-operation among several employees or involvement by external employees, leaving a document trail that is subject to internal and external audit (Ball, 2008). Similar to fraud, management fraud often starts with a small misstatement of quarterly earnings on financial reports that presumes not to be material, but then eventually snowballs into full-blown fraud and produces materially misleading

annual financial statements (Rezaee & Riley, 2010). Ball (2008) further implies that management fraud generally shares three properties: 1) inability to meet performance expectations; 2) personal costs – pecuniary or non-pecuniary – of failing to meet expectations, and 3) being able to convince oneself that real performance will improve soon.

The following definition of management fraud is proposed, as it emphasises the main concepts of the term 'management fraud' as utilised in this study:

> "A group of knowledgeable, highly educated perpetrators, who are in a position of power, trust, respectability and responsibility, who through well planned collusive schemes abuse the trust and authority normally associated with the position for personal and/or organisational gains."

The second concept relevant to this study will be clarified in the next section.

4.2.1.2. Units of the theory: organisational climate

Vidaver-Cohen (1998) argue that conceptualising organisational climate requires specifying a behavioural reference criterion and pertains to the notion that a unique climate exists for each organisational activity. According to Vidaver-Cohen (1998) it is important to note that organisational climate for certain behaviours does not cause individuals to perform that behaviour; rather, climate is the shared belief that the behaviour in question is expected by management, based on the prevailing perceptions of organisational signals regarding norms for behaviour in organisations.

Another assumption is that organisational climate serves as a intervening variable- a shared perception of managerial expectations for certain behaviours, based on common

interpretation of organisational signals (stimulus variables) that provides a conducive psychological environment in which performance of the expected behaviour is likely to occur. Since multiple behaviours exist in the same organisation, and since organisational stimuli are perceived in a variety of fashions, multiple climates exist within any organisation. According to Vidaver-Cohen (1998), another assumption is that climate is a multi-dimensional construct measured by assessing norms for organisational goal-setting and goal-attainment practices, as perceived by employees within an organisation.

In line with the discussed definitions and characteristics of organisational climate, this study defines organisational climate as:

> "The organisationally constructed perceptions of feelings and attitudes that employees share about fundamental elements of the organisation, which reflect the established norms, policies, values, and attitudes of the organisation's culture and influence an employee's decision making positively or negatively".

Based on this definition, the 8 Organisational Climate dimensions as compiled by Koys and De Cotis (1991), was identified as being the most suitable for this study, as they show evidence of validity, through factor analysis with an oblique rotation, using a seperate sample of managerial and professional employees (Koys & De Cotis, 1991). Further the dimensions as compiled by Koys and DeCotis (1991) are designed to measure organisational climate in a complex organisation, hence it was considered appropriate for this study.

4.2.2. Laws of Interaction (Among the Concepts)

To determine the fundamental relationship between the concepts, a hypothetical contingency table as proposed by Jaccard and Jacoby (2010, p.96) was used:

1. Compile a contingency table, listing the values of the "cause" as rows, and the values of the "effects" as columns;
2. Think of 100 hypothetical persons for each row of the table, that is, set the marginal frequency for each row to equal 100;
3. Of these 100 people, specify how many you think will fall into each column category, this represents the percentage of people in each category

According to the Jacard and Jacoby (2010), as a researcher inserts the numbers in a hypothetical contingency table, the researcher needs to verbalise the rationale for the numerical assignments.

Although the rationale for the numerical assignments will be dealt with in the section, it is important to note that for purposes of this study, the hypothetical contingency table was applied to identify the factors, but the relative numerical contribution was not used.

Table 4.1. Hypothetical contingency table indicating laws of interaction between organisational climate and management fraud

Cause	**Organisational Climate Determinant**								**Effect**	Total
	Economic conditions	Leadership style	Organisational policies	Managerial values	Member characteristics	Nature of business	Organisational size	Organisational life stage		
	5%	30%	15%	15%	20%	5%	5%	5%	Potential risk of management fraud	100%
	Organisational Climate Dimension									
Cause	Individual autonomy	Degree of structure	Organisational rewards	Trust	Group and team cohesion	Perceived individual pressure	Warmth and support	Risk taking	**Effect**	Total
	12%	12%	17%	5%	10%	23%	8%	15%	Potential risk of management fraud	100%

The rationale for the numerical assignments will be dealt with in the next section, by firstly examining the determinants and then the dimensions of organisational climate.

Economic conditions and management fraud

The Institute of Internal Auditors lists unfavourable economic conditions as a red flag, with the recent collapse of certain investment schemes illustrating how allegations of fraud, previously undetected, emerge in unfavourable economic conditions (APIPA, 2010; Spathis, 2002). According to Tracey, Gordon, White and MacPhail (2009), as the economy declines, both in South Africa and globally, new fraud threats emerge. When economic survival is threatened (either for the organisation or for the individual) the line separating acceptable and unacceptable behaviour can, for some, become blurred (Tracey et al., 2009). This view is supported by recent media accounts that show that organisations who were in financial trouble were associated with fraudulent employees (Krantaz, 2003).

Gill (2011) suggests that caution is needed when predicting that an adverse economic climate will lead to an increase in fraud as it is possible that the fraudulent crimes of employees are simply discovered in times of financial strain. If an organisation is experiencing poor financial performance, auditors and accountants may complete extensive evaluations to determine whether changes in practices may improve the company's situation. It is under these circumstances that ongoing fraud may be discovered. Alternatively, when organisations are performing well, there may be no need to evaluate current practices, so existing fraud may remain undetected (Gill, 2011; Pearce, 2001). Conflicting research views provided by Povel, Singh and Winton (2007) and Wang, Winton and Yu (2010), predict that the incidence of fraud should be a hump-shaped function of investor's beliefs about economic conditions, peaking when investors believe conditions are good, but not extremely good. In contrast, Povel et al. (2007) mention the work of Hertzberg who predicts that the incidence of fraud should increase as investor beliefs improve.

Based on this argument this study follows the previously stated view of Singleton and Singleton (2010, p.1) who affirm that: "When times are good, people steal. When times are bad, people steal more!" and as previously mentioned in Chapter 3, different climates develop according to the organisation's position in the economic cycle (DuBrin, 1984). Hence it would appear from the literature that management fraud is likely to occur in both favourable and unfavourable economic conditions, and therefore this determinant is awarded a hypothetical numerical assignment of 5%.

Leadership style

"Leadership is not a genetic gift or a family legacy; we have sympathetically observed some failures of those assumptions. It is not a warranty with a degree from an excellent graduate business school, though a rigor of that experience can provide valuable returns. Becoming a leader is an intentional process of growth that must be lived out experientially. One must have the will to say "yes" and even "no' to an unending series of tests, large and small, each demanding that we take one more step toward a definition of who we are. We must be ready to define our values, our character, and our leadership style. For durable, strong leaders, the process will not end. It will become a way of life, not only in business, but within our families, our various communities, and the world." - McCoy as cited in Mullane (2009, p.2).

Due to the growing interest of ethics in the field of management, researchers have begun to consider the ethical implications in leadership with a number of researchers (Brown, 2007; Ciulla; Fulmer, Gini, Lewis; Trevino et al. as cited in

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Huberts, Kaptein & Lasthuizen, 2007) arguing that leadership is the key variable influencing the ethics and integrity of employees (De Hoogh & Den Hartog, 2008; Robbins & Judge, 2011).

How an organisation's leadership creates an ethical or unethical atmosphere in the workplace is referred to as the tone at the top (Vinten, 2003; Zahra et al., 2007). Management's attitudes and actions will set the ethical tone of an organisation (Simpson & Taylor, 2013; Zahra et al., 2007). As top managers set the ethical and moral tone of the organisation, they need to set high ethical standards, demonstrate those standards through their own behaviour and encourage and reward integrity in others while avoiding abuses of power, such as giving themselves large raises and bonuses while seeking to cut costs by laying off long-time employees (Robbins & Judge, 2011). Even when leaders do not engage in fraudulent behaviour they can still promote wrongdoing by rewarding it, covering it up, and ignoring or condoning unethical behaviour (Zahra et al., 2007).

According to Aguilera and Vadera (2008) and Zahra et al. (2007), the influence of the CEO becomes even more significant when the CEO is particularly charismatic. Charismatic leadership occurs when CEOs are perceived as charismatic, visionary and inspirational (Zona et al., 2012). Charisma is defined as a certain quality of an individual by which he or she is considered extraordinary and treated as endowed with superhuman or exceptional powers as qualities (Aguilera & Vadera, 2008, p.439). Charismatic quality leads to greater identification, trust and reflexive obedience by subordinates (Zahra et al., 2007; Zona et al., 2012). Subordinates often mimic the charismatic leader's behaviour. Charismatic leaders usually form coalitions with unquestioning followers who fail to probe their leader's failings (Zahra et al., 2007).

Aguilera and Vadera (2008) suggest that Enron can be defined as an organisation with charismatic authority, with both Enron's CEO Kenneth Lay and ex-CEO Jeffrey Skilling being considered charismatic leaders. A characteristic of Skilling's leadership style was borne out in how Enron recruited, selected and promoted employees. Skilling's criteria for job candidate characteristics described a very smart, aggressive, glib extravert who could become a ruthless trader. Skilling hired only the "best and the brightest" traders, investment bankers, information and computer experts, programmers, and financial engineers, most of whom were graduates of prestigious universities. As part of his Analyst and Associates' Program, Skilling would annually hire from 250 to 500 newly produced MBAs from the top business schools in the country. Promotions and transfers came swiftly, without providing time to learn business specifics. Those who did not generate deals were quickly dispatched and, soon after, often sacked (Free, Stein & Macintosh, 2007).

What is evident from the literature is that leadership is critical in determining the tone of the organisation, as a poor tone at the top contributed to 9% of all the fraud cases reported to the ACFE, but was cited as the primary factor in 18% of cases that resulted in a loss of $1 million or more (ACFE, 2012). Examples of organisations that failed to lead from the top include, amongst others: WorldCom (Bernie Ebbers); Tyco International (Dennis Kozlowski), and Enron (Jeffrey Skilling and Kenneth Lay) (Schwartz, 2013). Following the collapse of Enron and Worldcom and other organisations, research emphasised the unrealistic hope and expectations of leaders as moral actors and agents of social improvement, and outlined the setting of professional constraints that require executives to respect their professional obligations and the need for redesigning compensation packages and avoiding perverse incentives to engage in unethical conduct (Zona et al., 2013). Pricewaterhouse Coopers as cited in Simpson and Taylor (2013, p.51) compiled a report for leaders that identified and set out principles for establishing and sustaining an ethical culture:

- Consistent and visible executive sponsorship of ethics and compliance-related issues is not just key, it is mandatory.

- Managers must first understand what the prevailing culture is before attempting to make wide-sweeping changes.

- Leaders must consistently 'do as they say', not 'do as they want to do' in a way that is aligned with and enforces the values and ethical standards of the business.

- Good behaviours must be rewarded and recognised, poor behaviours must be acted upon and necessary action undertaken, openly and transparently.

To summarise, an ethical leader can be seen as trustworthy, honest, transparent, responsible, caring, respectful and fair, acts with integrity and places the interests of the organisation and other stakeholders before his/her own personal interest (Schwartz, 2013, p.46).

If the leaders seem unconcerned with ethics and condone unethical behaviour in order to boost profits, employees will be more prone to commit fraud (Brown, 2007; Simpson & Taylor, 2013; Uhl-Bien & Carsten, 2007; Zahra et al., 2007). Research by Conner and Becker; Dolencheck and Dolencheck; ScDonald and Zepp and Trevino, suggest that the behaviour of top management will influence subordinates, ethical behaviour (Harris, 1990), therefore in corporate settings employees need the support of others, especially leaders to behave ethically (Brown, 2007). Based on this argument, the hypothetical numerical assignment for this determinant is 30%, as the importance of having a proper ethical tone from management in protecting the organisation against fraud that could cripple the organisation is supported.

Organisational policies

Bierstaker, Brody and Pacini (2006) and Mullane (2009), state that well written guidelines are useful for leaders when facing ethical dilemmas in the workplace and every organisation should create and maintain a fraud policy to guide behaviour. According to Handal and Blount (2009), a fraud and corruption risk management policy is defined as a statement that embodies the goals and behavioural norms that the organisation wants to instil in its staff and business partners. What is further evident from Chapter 3 is that specific organisational policies can influence organisational climate. Policies specify a particular and specific behaviour, enabling individuals to exercise discretion within a limited confine (Robbins, 1990). Embedding systems and processes to support the tone at the top, will help influence the organisational culture and measure the effectiveness of leadership action and behaviour over time (Simpson & Taylor, 2012). Internal controls potentially prevent errors and fraud through enhancing organisational and financial processes as well as ensuring compliance with the applicable laws (Rae & Subramaniam, 2008).

The organisation enforces its policies by identifying the underlying controls associated with its polices. Controls are technologies, procedures or a combination of the two that are aimed at ensuring proper orientations of internal business processes, and may be in place as a means of screening potential workers at the pre-employment stage, or in preventing and detecting different types of fraud by current employees. Examples of internal controls include background checks, anonymous reporting systems, and audits. Simpson and Taylor (2012) include statements of values and ethical policies as well as procedures designed to reinforce ethical behaviour such as training iniatives, a whistle-blowing hotline and inclusion of ethical and anti-fraud polices in staff manual (Simpson & Taylor, 2012, p.51). It is important that the

organisation must communicate its fraud policy to all employees and all employees should acknowledge in writing that they have read and understood the policy (Bierstaker et al., 2006).

A sound policy should encourage management to set the appropriate tone by stating that fraud and corruption will not be tolerated, and be proactive and reactive. A poorly constructed fraud and corruption risk management policy bolsters lawlessness and poor organisational values, as organisations lacking sufficient controls experienced median losses approximately 45% larger than organisations who had controls in place (ACFE, 2012; Institute of Internal Auditors, the American Institute of Certified Public Accountants and Association of Certified Fraud Examiners, as cited in Makhooane, 2011). In the Report to the Nations, the ACFE compared the median loss suffered by organisations which had anti-fraud controls in place with the median loss in organisations lacking control, and while all controls were associated with a reduced median loss, the presence of formal management reviews, employee support programs and hotlines were correlated with the greatest decrease in financial losses (ACFE, 2012).

Existing studies considered internal controls within the context of general deterrence theory, as well as rational choice to suggest that employees who contemplate committing fraud will first weigh perceived costs and benefits (Clark & Hollinger, 1980; Hollinger & Clark, 1983). Internal controls that are highly visible can serve as general deterrents. If it is known that an organisation regularly conducts reliable, internal audits of all departments, and dismisses those employees who are caught committing fraud, deterrence theory would suggest that the potential offender will decide that the risks of fraud (i.e., detection by the audit and subsequently dismissal) outweigh the perceived benefits (e.g., financial gain for the offender). The controls with the greatest associated reduction in fraud duration are those often credited with increasing the perpetrators' perception of detection (ACFE, 2012). The ACFE states that organisations that utilised job rotation and

mandatory vacation polices, rewards for whistle-blowers and surprise audits, detected fraud twice as quickly as organisations lacking these controls (ACFE, 2012). According to the ACFE, the following are control weaknesses that contribute to fraud:

- Lack of internal controls;
- Overriding of existing controls;
- Lack of management review;
- Poor tone at the top;
- Lack of competent personnel in oversight roles;
- Lack of independent check/audits;
- Lack of employee fraud education;
- Lack of clear lines of authority;
- Lack of reporting mechanism (ACFE, 2012, p.38).

Although it is evident that clearly written fraud and corruption risk management policies are key components for combating unlawful conduct as they provide a framework for measurement to ensure prevention, detection and investigation of fraud and corruption, this perspective does not explain the dynamics that unfold over years and leads to emergence of organisational scandals in the absence of effective polices, and therefore this determinant is given a hypothetical weight of 15% (ACFE, 2012; Sanlam as cited in Makhooane, 2011; Zona et al., 2013).

Managerial values

When corporate scandals make headlines, the values of managers are the topic of debate, with values being identified as an important basis of individual differences in terms of ethical behaviour (Ghosh, 2008; Harris, 1990; Quick & Nelson, 2009). A stream of thought which emphasises the role personal values plays on the incidence of fraudulent financial reporting, is represented by the work of Milton Rokeach (Brief, Dukerich, Brown & Brett, 1996). Rokeach distinguished between two types of values namely, Instrumental and terminal: the prior value refers to a desirable end state and it is the goal which an individual would like to achieve during his/her lifetime, while an instrumental value can be viewed as a means to achieve the terminal values and hence refers to a preferred mode of behaviour (Robbins, 2001).

A study conducted by Ashforth and Hood draws from the Rokeach classification of values and demonstrates that social, personal and morality based values are directly related to ethical practices and diversity training within organisations (Zona, Minoja & Coda, 2013).

An understanding that individuals' values differ but tend to reflect societal values of that period in which they entered the workforce may assist in explaining and predicting behaviour (Robbins, 2001). Robbins (2001) lists the following four dominant work values in today's workplace: Protestant work ethic; Existential; Pragmatic; Generation X. Generation Y can be added to the list. These values are important as they affect how individuals behave on their jobs in terms of what is right and wrong (Quick & Nelson, 2009). The Protestant work ethic entered the workforce in the early 1940s and employees were characterized as hard workers, conservative and loyal to the organisation. When faced with an ethical decision, they based their decision on what was best for their organisation and work was viewed as a central part of their

lives. This approach indicated that people should work hard, as those who worked hard were more likely to find a place in heaven (Quick & Nelson, 2009). The Existential stage entered the workforce during the 1960s through to the 1970s. This brought with it a large measure of "hippie ethic" and it was concerned with quality of life. Employees' desire for autonomy directed their loyalty towards themselves rather than towards the organisation that employed them. They were in general non-conforming and wanted autonomy. The third dominant work value was called the Pragmatic stage and it penetrated the workforce between 1970s and 1980s and employees now emphasized achievement, success and ambition. Born towards the end of the baby boom period, these workers were pragmatists who believed that the end can justify the means. Values such as sense of accomplishment and social recognition ranked high among these individuals. Another category encompasses what has become known as Generation X. This stage values flexibility, a balanced lifestyle and the achievement of job satisfaction. This generation seems less likely to make personal sacrifices for the sake of their employer than previous generations were (Robbins, 2001). Today the Millennials enter the world of work with the belief that they are charged with cleaning up the mess left behind by the two preceding generations (Shepard, 2004). Millennials are confident, highly team orientated and conventional. They tend to be strong achievers if they are properly motivated and are morals-driven, so they don't understand the need for outside authority in their lives (Shepard, 2004). Millennials are more entrepreneurial and socially conscious and challenge existing assumptions. (Bergh, 2011). Although it is expected that this generation will require a lot of maintenance, such as more compensation and status from organisations, it is also expected that they will be the most high performing (Bergh, 2011). Robbins and Judge (2009) warn that the stereotypical views of the various generations require further research and that there is not yet enough evidence that this proposed

Although previous research indicates that values may be predictive of behaviour (Zona et al., 2013), a critical question both on theoretical and practical grounds remains: what particular terminal values may be associated with management fraud, as existing literature does not tie particular values to specific kinds of unethical acts (Brief et al., 1996)?

Values held by executives are acknowledged from previous research as playing a critical role in an employee's decision to commit fraud, since values lead to action and shape decisions, but even organisations like Enron, despite being quite explicit in their office banners and training videos about core ethical values, including integrity, honesty and respect, failed to live up to them (Schwartz, 2013). The reason according to Ghosh (2008) is that Enron CEO Skilling considered cheating as acceptable behaviour as long as employees made money and hence unethical behaviour became the norm. Grojean et al., 2004) propose that leaders, specifically middle management should be trained in acceptable organisational values, as climate regarding ethics is a value laden construct. Therefore, based on this argument, it is clear that, to be effective managerial values must be incorporated into other processes and practices and therefore this determinant is awarded a hypothetical score of 15%.

Member characteristics

Research conducted by Zahra et al., (2007), demonstrates how individual level factors can either weaken or strengthen the effects of industrial or organisational pressures on the incidence of top management fraud. Individual characteristics affect the degree to which rising pressures from society, the industry or the organisation may result in the decision to commit fraud. In 2007, KPMG carried out research on the profile of the white collar fraudster, using details of fraud cases in Europe, India, the Middle East and South Africa. It highlighted the following facts and figures in relation to fraudsters:

- Perpetrators are typically college educated white males;
- Most fraudsters are aged between 36 and 55;
- Most fraud is committed by men;
- Median losses caused by men are twice as great as those caused by woman;
- A high percentage of fraud is committed by senior management;
- Losses caused by managers are generally more than double those caused by employees;
- Average losses caused by owners and executives are nearly 12 times those of employees;
- Longer term employees tend to commit larger scale fraud;
- Fraudsters often work in the finance department, operation/sales or as CEO. (Doody, 2008, p.15).

This report also found that the type of person committing the offence depends on the nature of the fraud being perpetrated. Employees are most likely to be involved in asset misappropriation, whereas owners and executives are responsible for the majority of financial statement frauds (Doody, 2008), and therefore this determinant achieves a hypothetical score of 20%.

Nature of business

Fraud and management fraud is an issue that all organisations face regardless of size, industry or country (Doody, Birch, Katzenberg, Finn, Hill, Sharp, McDonagh, Robinson & Campbell, 2008; Stalebrink & Sacco, 2007). Most prior studies

were limited to a single organisation, or single types of organisations, resulting in little knowledge about how variation in the organisational setting might contribute to the varieties of fraud committed (Vaughan, 2001).

The literature suggested that crime in general might be more likely in certain types of organisations (e.g., bureaucracies), but failed to identify whether certain types of crime were more common in specific organisational settings that were not profit-oriented, such as charities or religious institutions (Fleckenstein & Bowes, 2000). Considering organisations that differed in function and purpose made it possible to determine whether types of fraud varied across unique settings. The results of a survey conducted by PwC demonstrated that organisations reporting fraud were spread across many industries (Doody et al., 2008). The findings of the ACFE indicate that nearly 40% of organisations which suffered from fraud were privately owned, while 28% were publicly traded, implying that two-thirds of the victims were from profit organisations (ACFE, 2012). Via counterfactual research, Stalebrink and Sacco (2007) suggests that financial statement fraud in the government has its origins in political rather than economic incentives and that it is rationalised by elected rather than non-elected officials.

Broader research on public perception of crime provided some guidance as to how fraud against different types of organisations might be perceived. An early survey conducted by Smigel (1956) asked citizen participants to rate hypothetical situations in which victim organisations differed in type and size. Results showed that there was a positive relationship between the size and level of bureaucracy of the organisation and the willingness to approve of stealing from that organisation. Smigel and Ross (1970) hypothesized that the reasons why employees, suppliers, customers, and clients steal from organisations can be found in public attitudes toward bureaucracies. They argued that the public fails to

stigmatize crimes against bureaucracies, which results not just in increased crime against organisations, but also in limited public sympathy toward organisational victims (Smigel & Ross, 1970, p.5).

The mixed results of this determinant suggest that although organisational and environmental conditions must be considered in any assessment of organisational fraud, the adoption of the organisation as the unit of analysis does not allow for effective fraud prediction (Zona et al., 2013). Therefore, although it is acknowledged that the nature of the business is not an isolated variable, as it influences many other organisational characteristics such as policies, leadership style and characteristics of members, this determinant scores a hypothetical 5% as there appears to be little knowledge about how variation in the organisational setting might contribute to management fraud (Dubrin, 1984, Vaughn, 2001).

Size of organisation

Sutherland's (1949) research on large corporations first called attention to organisational size as an important explanatory factor in white-collar crime research. The finding that larger organisations were associated with greater incidence of crime was consistently supported (Baucus & Near, 1991; Staw & Swajkoski, 1975; Zona et al*., 2013*). Baucus and Near's model of illegal corporate behaviour used an empirical test to demonstrate that larger organisations that operate in dynamic bountiful environments were most likely to behave illegally (Zona et al., 2013). However, according to the ACFE, small organisations, which employ fewer than 100 employees suffer fraud more frequently than large organisations which are hit by higher average losses, resulting in this high profile frauds being reported more extensively in the media (ACFE, 2012; Doody, 2008). Research has shown that organisational size is related positively to specialisation, formalisation and vertical span, and negatively to centralisation of the organisation, with larger organisations more likely to employ or hire

CFEs to formally investigate fraud cases (ACFE, 2012; Robbins, 1990). Further research has proven that larger organisations have more rules, more documentation, and are more specialised (Robbins, 1990). What is further stated by Simpson and Taylor (2013), is that larger organisations might contain more groups or sub-cultures that view themselves as distinct from the organisation. These groups might establish a clear identity of themselves and create barriers between themselves and the rest of the organisation. These sub-cultures can start to develop solutions to certain issues that are outside the codes of conduct (Simpson & Taylor, 2013).

Based on the above conflicting research findings, this determinant does not appear to be a significant determinant of management fraud as both small and large organisations experience fraud, and therefore this determinant is awarded a hypothetical score of 5%.

Organisational life stage

What is evident from the literature is that newly created organisations tend to be less formal and smaller, while mature organisations tend to be larger and more formal (Dubrin, 1984). This determinant overlaps with a number of previously stated determinants (organisational polices, structure and size) and therefore this determinant is given a hypothetical score of 5%.

4.2.2.2. Rationale for numerical assignments for organisational climate dimensions

The rationale for the numerical assignments of the determinants of organisational climate was discussed in the previous section; this section will focus on the rationale for the dimensions of organisation climate.

Individual autonomy

Individual autonomy refers to an individual's freedom to exercise responsibility, independence, and initiative, as well as self-determination with respect to work procedures, goals and priorities (Greenberg & Baron, 2000; Koys & DeCotis, 1991).

As the organisation expands its operations, environmental dynamism allows each division or unit to work independently (Zahra et al., 2007). Another important trend in corporate governance is the growing separation of the positions of board chairperson and chief executive officer (Zahra et al., 2007). Although intended to reward good performance by chief executive officers, the practise of combining both the positions in one person has resulted in concentrated corporate powers. When one person holds these two positions, the system of checks and balances need to retain integrity and objectivity in the decision making. Autonomy in turn allows senior managers the opportunity to commit and conceal fraud (Zahra et al., 2007). Worst, when an unethical person holds the two important positions at once, he/she can get away with committing fraud and concealing it (Zahra et al., 2007). Therefore as it appears from the literature that individual autonomy can result in fraud, therefore this dimension is awarded a hypothetical numerical assignment of 12%.

Degree of structure

The degree of structure refers to the feeling that employees have about the constraints in a group; rules, regulations, procedures, and also whether there is an emphasis on red tape and bureaucracy (Koys & DeCotis, 1991). Technological advances, market changes and competitive moves alter organisations' external environments and may influence the dynamism of an organisation's environment, which implies the speed and unpredictability of change in a given environment (Zahra et al., 2007). Ironically, it is these changes that are not only conducive to enabling technological and economic development, but also deviant corporate acts (Passas, 1990). Passas (1990) argues that within the blurred structure of contemporary society, the lines between legitimate and illegitimate behaviour become blurred and where there is a degree of uncertainty or confusion as to what is acceptable and what is not, comparatively high levels of management fraud can be expected.

As the environment becomes more complex, business settings comply with corresponding complex organisational structures that make it difficult to fully comprehend the various transactions an organisation undertakes, which provides opportunities for top managers to commit fraud. Organisations address complex environments, by allowing managers more discretion that could enable managers to commit fraud (Zahra et al., 2007). Within this dynamic environment, one factor that can contribute to higher incidence of management fraud is the increased specialisation of key personnel (Zahra et al., 2007). According to Zahra et al. (2007), centralisation provides top executives with an opportunity to commit fraud and conceal it from others when organisational performance decreases. These centralised structures are characterised by formal rules and tend to have clear financial systems in place. Such controls establish quotas but rarely ask people how they are accomplished. These rules might promote and perpetuate fraud. When the environment is hostile, senior

managers might even restrict communication about the organisation financial position and performance (Zahra et al., 2007).

The degree of structure, specifically the amount of discretion, specialisation and amount of communication by senior management, seems to provide an indication of the strength of the fraud climate, and therefore this dimension is awarded a hypothetical score of 12%

Organisational rewards

Organisational rewards refer to the degree to which the organisation rewards an individual for a job well done (James & Sells, 1981). In addition, rewards or recognition refer to the perceived equity of the recognition and advancement policy of the organisation (Dippenaar & Roodt, 1996). Over time, industries develop unique histories and norms that shape behaviour in the organisation, with some cultures valuing aggressiveness and fast paced moves, while others reward more calculated and strategic actions (Zahra et al., 2007).

Within Enron a critical trait of Skilling's leadership style was the importance of rewards and status (Free et al., 2007). Compensation plans, a powerful shaper and emblem of Enron culture, had one purpose in mind — to enrich the executives, not to enhance profits or increase shareholder value (Free et al., 2007). Expectations regarding payback periods, time horizons and acceptable return rates on investments also vary from one industry to another, with senior executives knowing that their tenures, compensation packages and even reputations are determined by the extent to

which their organisations perform relative to analysts' forecasts. Some managers may view fraud as a way to correct deviations from these forecasts (Free et al., 2007; Zahra et al., 2007).

Research conducted by Johnson, Ryan and Tian (2008), found the managers who commit fraud face greater financial incentives to do so and that the likelihood of corporate fraud is positively related to incentives from unrestricted stockholdings, and is unrelated to incentives from restricted stock and unvested and vested options. The same study found that unrestricted stockholdings are the largest source of managerial incentives to commit fraud (Johnson et al., 2008).

Reinforcement contingencies are vital in soliciting desired behaviour from employees, with research explicitly supporting the idea that successful policy implementation-including social and ethical policies, is not likely to occur unless the behaviour is tied to the reward system (Worrel et al., 1985). Moral senior managers make ethics salient by communicating clear ethical standards and by using rewards to hold followers accountable (Brown, 2007). Boeing CEO, Jim McNerny, believes that ethical leadership can be developed by modelling, teaching, expecting, measuring and rewarding ethical behaviour (Brown, 2007). The reinforcement system of an organisation must support ethical behaviour and employees should be rewarded for ethical behaviour and punished for unethical behaviour (Stead et al., 1990). A number of Enron insiders have commented on Skilling's footprint as CEO on Enron's emerging organisational culture, a culture favouring risk taking, a mercenary approach to profit making and a win-at-all costs trading approach (Free, Stein & Macintosh, 2007). Therefore, the perception of employees in terms of equity in rewards together with the perception of employees as to whether ethical or unethical behaviour is rewarded, could provide an indication of the strength of the fraud climate, and therefore this dimension is awarded a hypothetical score of 17%.

Trust

Trust is seen by individuals in the organisation as a freedom to communicate openly with members at higher organisational levels about sensitive or personal issues in that hope that the integrity of such sensitive issues will not be violated (Joyce & Slocum, 1984). In one of the first descriptive studies of ethical leadership, Linda Trevino and colleagues interviewed senior management in a variety of industries. The purpose of the research was to understand how individuals describe ethical leadership (Brown, 2007). Brown discovered that ethical leaders were seen as principled decision makers who care about individuals and the greater good of society, and were described as moral persons who were honest, trustworthy and fair and were known for acting ethically in their private and professional lives (Brown, 2007). Ethical leadership is based on trust and fairness (Brown, 2007). Researchers studying organisations have discovered that trust and fairness are related to a number of positive attitudes, behaviours and outcomes for organisations. Perceptions of trust in leaders has shown to improve team and organisational effectiveness, organisational citizenship behaviour, job satisfaction and organisational commitment (Elsbach & Currall, 2012).

Trust can be viewed as a social lubricant that makes it easier to get business done inside and outside of organisations. Leaders who have earned the trust of others are afforded more discretion and are allowed to take more risks and are likely to have more opportunities come their way, which may result in unethical behaviour being likely to succeed for a longer period of time (Brown, 2007).

From the literature it appears as though a high level of trust in management, together with a high level of management risk taking and low level of perceived structure, might indicate a high climate strength in terms of management fraud. Therefore it appears that this dimension on its own does not imply a high level of management fraud, but rather positive organisational outcomes. Based on this argument this dimension on its own is awarded a hypothetical score of 5%.

Group and team cohesion

Cohesion is the perception of togetherness and sharing within the organisational setting (Koys & DeCotis, 1991). According to Simpson and Taylor (2013), the more desirable a group is to join, the more readily individuals will yield their moral consciousness and accept rationalisations for actions which, outside work, they would see as unacceptable.

Zona et al. (2013) demonstrates that CEO's with particular charismatic personal traits are capable of fostering stakeholders' cohesion in support of their imbalanced strategic plans that may lead to management fraud. To this end they may offer stakeholders current benefits or promise them future advantages, misrepresent the organisation's actual economic conditions and leverage their charismatic leadership (Zona et al., 2013). Simpson and Taylor (2013) states that, ironically, team building and other similar practices that are designed to create coherent identities can serve to emphasise unethical practices. At Enron the roles of Skilling and Lay were seen as critical factors in developing the dysfunctional culture. The discontinuity between acceptable and unacceptable behaviour at work and social norms and ethics outside work are rationalised by employees by compartmentalization of their lives. In order to achieve this, employees seek support by socialising with work colleagues outside work or with those in a similar situation. This reinforces the group norms and provides rationalisation and self-justification for their actions (Simpson & Taylor, 2013).

Unethical behaviour by employees can develop gradually or insidiously to such an extent that normal standards of ethics become distorted and then rationalised to such an extent that employees feel that what they are doing is justifiable. However, new employees need to be socialised through induction into accepting these patterns of behaviour (Simpson & Taylor, 2013). If they are not then they may find themselves on the outside of the organisation, unable to fit into the existing culture, and they may even become a danger to existing employees who are engaging in dysfunctional behaviour by reporting them to a third party (Simpson & Taylor, 2013). Three powerful socialisation techniques that have been identified are co-option, incrementalisation and compromise. In co-option rewards are used to induce an attitude change towards dysfunctional behaviour, while incrementalisation introduces employees gradually to corrupt acts, and compromise may result when employees are seeking a solution to a problem or dilemma (Simpson & Taylor, 2013). When industry becomes dominated by a few organisations, the possibility of collusion increases. Large organisations that dominate these industries can deploy their resources to influence regulators, escaping public scrutiny (Zahra et al., 2007).

Managerial fraud includes illegal behaviour intended to misrepresent the actual conditions of the organisation, such as falsification of annual accounts, false communication to the market or to regulatory bodies, misrepresentation of performance and covering up or hiding insolvency (Zona et al., 2012). Managerial fraud creates an illusion among stakeholders that the organisation's strategy is more successful than it really is, thus increasing the stakeholder's support of the CEO and his/her strategy (Zona et al., 2012). Skilling's leadership style also included deliberate role modelling, teaching and coaching, which involved exposing employees to exaggerated claims (Free et al., 2007).

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Research conducted by Zona et al. (2012) suggests that charismatic traits may serve unethical leadership in fostering stakeholder cohesion. Therefore it appears as though the level of cohesion between management and all stakeholders should play a role in the strength of the management fraud climate, and hence this dimension achieves a hypothetical score of 10%.

Perceived individual pressure

The way individuals perceive time demands in relation to task completion and performance standards is referred to as pressure (Koys & DeCotis, 1991). Zahra et al. (2007) describes a number of societal, industry and organisational factors that can pressure management and even encourage fraudulent management behaviours. Research conducted by Carrol and Posner and Schmidt (as cited in Harris, 1990) examined perceived organisational pressure on individuals at different organisational hierarchical levels, and stated that supervisors feel greater pressure than middle and top managers to compromise their personal values in order to succeed in the organisation. For a detailed discussion on the role that pressure may play, please refer to section 2.6.1. However despite these pressures, it is evident that the ultimate decision to commit fraud is still an individual decision and a manager's background could influence his willingness to fraud (Zahra et al., 2007).

The role of pressure in an individual's decision to commit fraud is well documented and forms an important variable within the highly accepted fraud triangle model, and therefore pressure as a dimension of management fraud climate achieves a hypothetical value of 23%.

Warmth and support

Warmth and support reflect the perception of tolerance of members by management, which includes the willingness of employees to learn from mistakes without fear of victimisation or reprisal (James & Sells, 1981). Support refers to the perceived assistance that management and other employees in the organisation offer one another, with the emphasis on an equitable exchange between management and employees (Dippenaar & Roodt, 1996).

According to Brown (2007), ethical leaders are individuals who do the right thing, even when it is unpopular. McClelland argued that great leaders should have a low need for affiliation and should not concern themselves with how they are perceived by others (Brown, 2007). Employees prefer to work for leaders who listen to their concerns and a leader who disregards feedback from employees can alienate and frustrate employees (Brown, 2007).

The level of warmth that employees receive from management might play a role in the strength of the management fraud climate, as managers who are too concerned with making popular decisions, might behave unethically, while support does not seem to have an effect on the perceived management fraud climate. Therefore this dimension combined achieves a hypothetical score of 8%.

Risk taking

If employees perceive organisational practices as equitable and unbiased, such perception is regarded as fair. When employees perceive that change and creativity are encouraged, as well as risk-taking initiated, this perception is regarded as innovation (Koys & DeCotis, 1991).

In a free market system, competition disciplines management and encourages innovation and risk taking that create wealth (Zahra et al., 2007). The now famous whistle-blower at Enron, Watkins, stated in his report that Enron's CEO, Skilling, had a compulsion about creativity and competiveness. Therefore this dimension receives a hypothetical score of 15%

The laws of interaction between the different concepts is presented in Figure 4.1.
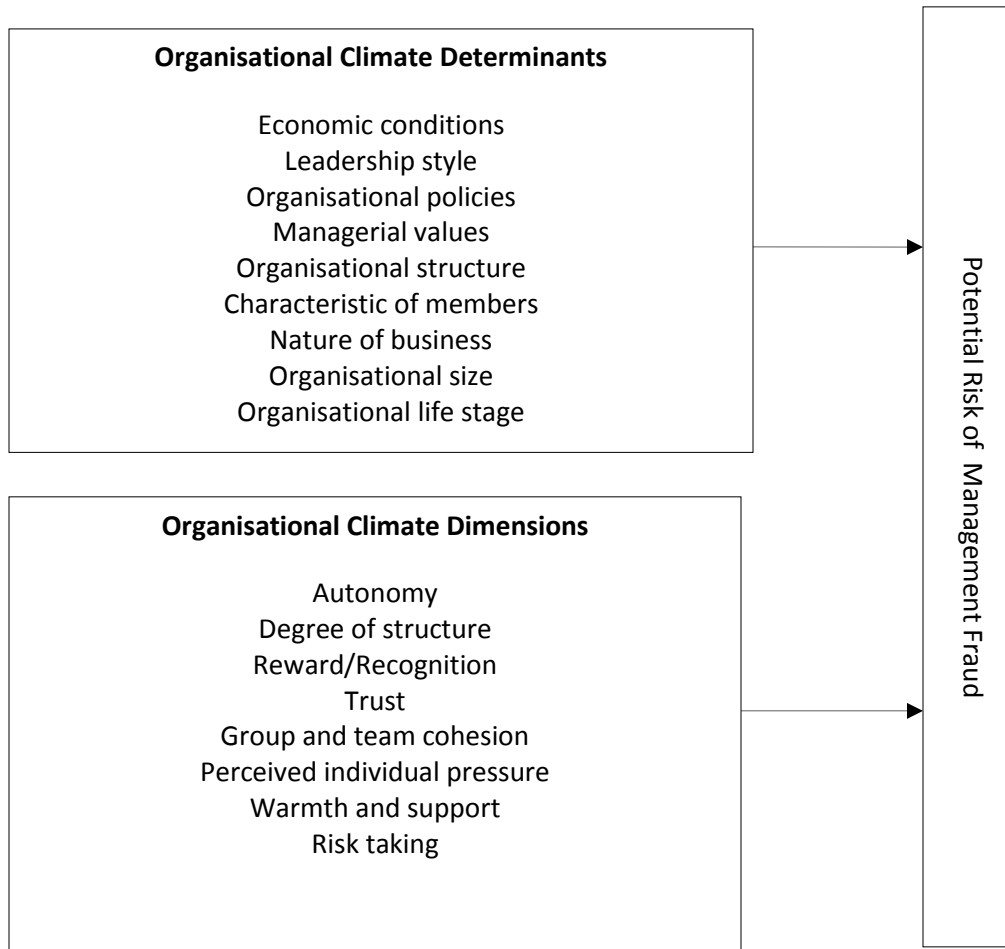
Figure 4.1. First conceptual model indicating laws of interaction

Working from left to right, this conceptual model implies that both organisational climate determinants and dimensions will have an impact, to varying degrees, on a manager's inclination to commit fraud, and hence on the potential risk of management fraud. The role of the various determinants and dimensions in organisational climate are hypothetically rationalised in the section above. According to Jaccard and Jacoby (2010), once the direct causes have been identified the next step is to turn the direct causes into indirect causes, by identifying the variables that mediate the direct relationship. The role of the mediating factors as implied from the literature review is indicated in figure 4.2.

However it is important to note that for purposes of this study the organisational climate determinants and dimensions will only be empirically validated, while the components right of the block "management fraud climate" were only inferred from the literature and will not be validated in this study.
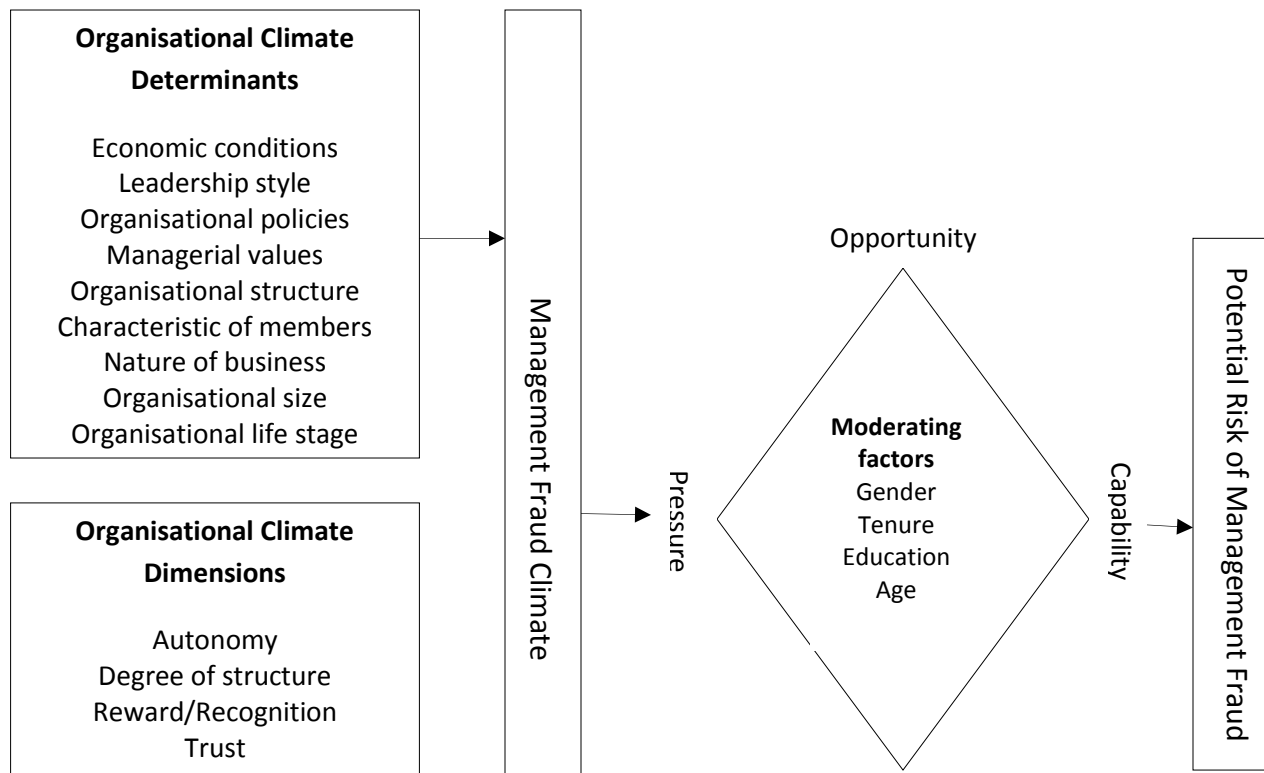
Rationalisation

Figure 4.2. Inclusion of mediating factors on the conceptual model indicating laws of interaction

Working from left to right, this model assumes that organisational climate determinants and dimensions will have an effect on the perceived level of management fraud climate, and will have an impact on the potential risk of management fraud. However, this model assumes that the potential risk of management fraud is moderated by the fraud diamond and a number of moderating factors. It is evident from the literature that, although an organisation's climate may impact on the potential risk of management fraud, fraud is more likely to occur when the following three risk factors are also present: 1) pressure, 2) opportunity and, 3) and the person can rationalize the fraudulent behaviour (Wolfe & Hermanson, 2004). Hence this model assumes that despite a climate that encourages fraud, managers are unlikely to consider fraud as an option unless there is sufficient pressure, opportunity and rationalisation. The above model follows the approach of Wolfe and Hermanson (2004), and includes capability, which is described as an individual's personal traits and abilities that play a significant role in whether fraud may occur. In addition, the literature review conducted implies that the majority of white-collar crimes are committed by well educated (formal education), middle aged (45-55 years), men and women

(males account for little more than half of all incidents), who have a long tenure (10-15 years) with the organisation, who are often in a position of trust and have no criminal history (90% have no criminal record) (ACFE, 2009; ACFE, 2012; Murcia & Borba, 2007; Ramamoorti et al., 2009). Therefore, in addition to the fraud diamond, these moderating factors were also included in the model as factors mediating the link between organisational climate and management fraud.

4.2.2.3) Boundaries of the theory (the boundaries within which the theory is expected to apply)

Dubin (1978) describes the boundaries of a theory as defining the domain within which the theory is expected to apply. The boundaries of a theory distinguish its theoretical domain from aspects of the world not addressed by the theory. The domain within which this theory is expected to hold is the domain of a South African organisation both in the private and public sectors, and only applies to the detection of management fraud.

4.2.2.4) Systems states

Dubin (1978) defines a system state as a state in which all the units of the system assume featured values that have persistence through time, regardless of the duration of the time interval. The model proposed satisfies all three requirements, since 1) the model includes all the important units of the system (at least all the units that have been identified as important in previous research); 2) The relationships between all the units described in figure 4.2. are long-

lasting relationships, and 3) there is no overlap in values between any of the units, so each unit can be assigned a unique value.

4.2.2.5. Propositions of the theory (logical deductions about the theory in operation)

The propositions of the theory are stated in section 5.5.1.5.

4.3. SUMMARY

In this chapter, by applying the first five steps of Dubin's methodology the initial conceptual management fraud climate model was presented, which included the incorporation of meditating factors. Further the concepts were then linked to each other through a hypothetical contingency table and the rationale for the hypothetical values, as assigned, in the contingency table were discussed.

As discussed in the next chapter, the study digressed from Dubin's (1969; 1978) empirical validation section, and utilised analytical induction and Lawshe's content validation method to validate the conceptualised model. Making use of the immersion method as described by Gilgun (2001), analytical induction was used in this study to refine the theory based on the feedback received from the participants, and Lawshe's content validation was used as a verification, while the theory that was built according to Dubin's methodology, allowed the researcher to make sense of the evidence.

CHAPTER 5: EMPIRICAL INVESTIGATION

5.1. INTRODUCTION

This chapter examines how the sampling of participants in this study was conducted, by exploring both the rationale behind the sampling approach and the selection of the participants. After discussing the selection of participants, the study then provides motivation on the measuring instrument used in this study, before clarifying the procedure on how the data was collected, stored and analysed. The manner in which the results will be reported in this study is also clarified in this chapter.

Heeding the advice of Bryman (2001), who states that sampling error and sampling related error (or case selection error in the case of qualitative research) can be regarded as two of the four major errors a researcher may make (the other two being data collection and processing errors), the care I took in selecting my participants will be discussed in the next section.

5.2. PARTICIPANTS

According to Patton (2002); Symon and Cassell (2013), qualitative research requires that the data to be collected must be rich in description of people and places, and for this reason, qualitative researchers will use purposive sampling methods

by identifying where research participants could be easily reached, and selecting especially informative ones. Silverman (2001) emphasises two specific approaches to selecting research participants. The first is purposive sampling, which allows the researcher to select a research participant based on a feature and/or process of interest to the researcher (Creswell, 2013). Silverman (2001) emphasises the point that the research participant needs to be selected according to critical analysis of the population being studied and based on the understanding that the research participant must add value to the outcome of the study.

An additional approach identified by Silverman (2001) is theoretical sampling. Here a particular kind of purposive sampling is used, namely selecting certain a research participant for his or her potential to contribute to the development and/or testing of theoretical concepts. Informants are viewed as excellent judges of the issue being investigated and add relevance and richness to the theory formulation process (Fine & Elsbach, 1999). The researcher utilises their special knowledge or expertise about some group to select subjects who represent this population and that is sometimes referred to as judgemental sampling (Berg, 2007). Berg (2007) supplements Silverman (2001) by including convenience sampling, snowball sampling and quota sampling. The first approach, convenience sampling relies on available subjects, who are easily accessible or close at hand. Snowball sampling involves first identifying several subjects with relevant characteristics and interviewing them or having them answer a questionnaire. Referrals of other individuals are then requested from these individuals who possess the same attributes as they do (Berg, 2007). In this study, the researcher selected to use theoretical convenience sampling, supplemented by snowball sampling.

5.2.1. Sample Size

Sommer and Sommer (2002) believe that in deciding sample size, researchers need to consider both statistical logic and practicality. The reduction in sampling error that results from a large sample may not be worth the additional time and effort required to obtain additional information. According to Guest, Namey and Mitchell (2013), sampling should continue until the point at which no or little new information is being extracted from the data is reached, a point called theoretical saturation.

Sommer and Sommer (2002) further state that in order to avoid the accusation that data collection was halted as soon as results supported the hypothesis, the sample size must be specified in advance. This study followed the recommendations of Bernard (2013) who states that a theory that is based on 10-20 cases and goes on to explain another 10-20 cases, provides strong evidence that the theory should be accepted.

5.2.2. Selecting Participants

For the first part of my study, I initially tested my initial conceptual model against 4 pilot cases. Respondent 1 (RP1) was a qualified auditor with 13 years experience in both the private and public sector. Currently he is working in the academic field, as a senior lecturer at a South African University. The second participant (RP2) has worked for 32 years in the public sector in internal auditing and risk management and is currently employed in a management role within internal auditing for the last 7 years at a South African University. He has a diploma in internal accounting. Respondent 3 (RP3) is currently employed at a South African University in the Department of Public Management as a lecturer. Before commencing his employment as a lecturer he served as a director within the government sector. He has 38 years financial experience in the government sector and is currently completing his doctorate in public governance. The fourth respondent (RP4) has a

doctorate in industrial psychology, who has worked in the academic field for the last 14 years. His speciality within this domain is statistics and he has worked at various Universities and acts as consultant to a number of institutions on statistics. He was selected due to his extensive knowledge of statistics, model development and theoretical knowledge of organisational climate.

Based on their feedback the researcher reformulated the model and proposed the model to the same 4 cases and 13 new cases. Respondent 5, works within the Department of Social Development within the financial office. She has approximately 25 years of experience within this department and is currently in a management position. She is directly involved in managing financial risk, compiling of budgets and preparing for financial audits. She was a degree in humanities. Respondent 6, works within the Department of Public Works and Rural Development and has a law degree from a South African University. He's work involves the allocation of tenders and he has 4 years' experience in this position. Respondent 7 has a degree in financial management, with a number of course in the fraud domain and has worked in the public sector for 8 years. Currently he is employed as an independent risk consultant. Although respondent 8, has no formal financial qualification she works within the human resources department within the Department of Housing and has directly observed fraudulent awarding of tenders and irregular appointment of candidates. Respondent 9, 10, 11 and 12 all work within the Department of Social Work, specifically within the internal auditing section. Respondent 9 has a degree in social sciences, but commenced her employment as a financial officer and is currently employed within the internal auditing department as a section head. Respondent 10 and 11, are all relatively new to the field, with only approximately 2 year experience, but both have a formal university qualification and have been directly involved in the detection of financial management fraud. Respondent 12 occupies a senior position as section head of the internal auditing section and has a post graduate degree in financial management and auditing and has worked for

approximately 26 years within this field. Respondent 13 works within a national private organisation as a sales representative. Although he has no financial background, he was involved in an internal investigation by his organisations that resulted in his manager being dismissed for fraudulent financial transactions, which was committed over a 4 year time frame. His opinion was sought as I felt he could provide valuable insights on the organisational climate created by this manager and how this financial irregularity was allowed to carry on for a 4 year period. Although respondent 14 has retired, he served as a director for a large national group of organisations, and he was also implicated, but later vindicated of financial fraud committed by a sub-ordinate, to the value of approximately 6 million over a 11 year time span. Respondent 15 works as a police detective within the organised crime division, he as formal police training and has served within this division for the last 9 years. He is actively involved in the detection and investigation of fraudulent practices. Respondent 16 owns a small private company that employs 3 people and has been the victim of fraud to the value of approximately R150 000. Respondent 17, was an organisational development specialist, with a doctorate in industrial psychology, who specialises in organisational climate.

At this stage a second-round of feedback in terms of the proposed model was obtained from 6 additional cases. Although the sample was relatively small in this study, the 23 cases resulted in theoretical saturation and no further insights would have been gathered from subsequent cases. The second-round of participants (6) were all certified fraud investigators with a minimum designation of head of department at various companies, including Discovery Holdings, Pricewaterhouse Coopers, Deloitte, Auditor General South Africa and ACFE South African Chapter. A certified fraud examiner credential denotes proven expertise in fraud prevention, detection and deterrence (www.acfe.com). Registered by SAQA, per the requirements set out in the National Qualifications Framework Act, Act 67 of 2008, this officially affords professional status to individuals with certified fraud examiners qualification (www.acfesa.co.za). Research conducted by the Association of

Certified Fraud Examiners as part of preparing the 2012 Report to the Nations on Occupational Fraud and Abuse determined that in organisations with certified fraud examiners on staff, fraud were uncovered 50% sooner and the median loss was 44% percent lower (ACFE, 2012). These participants were carefully chosen as certified fraud examiners have a unique set of skills that are not found in any other career field or discipline, as they combine knowledge of complex financial transactions with an understanding of methods, law and how to resolve allegations of fraud (www.acfe.com).

During the pilot and first round of interviews, the researcher approached potential research participants individually, explained telephonically to them what the study was all about and what their involvement would entail. This was done to establish trust and credibility amongst the participants (Clark, 2010). My sampling was not a once-off process, as throughout the data gathering the researcher had to consider the inclusion of new cases as proposed by Creswell (2013). The study's pool of potential cases was therefore dynamic and expanded as the study progressed. Although the research participants were all from a convenient location, each individual was selected objectively, based on his or her ability to contribute to the study.

Before approaching the appropriate participants, I needed to make a decision on the appropriate data gathering method.

5.3. MEASURING INSTRUMENTS

Babbie and Mouton (2001) list a number of data gathering methods that are used in qualitative research. The list includes basic individual interviewing, individual in-depth interviews, focus group interviews, general observation, participant observation and personal documents such as autobiographies, diaries and letters, as the main data-gathering methods.

5.3.1. Interviews

According to Babbie and Mouton (2001); Fontana and Frey (2003); Mason (2012); Richards (2006) and Rule and John (2011), the individual interview is one of the most frequently used and powerful methods within the qualitative approach for gathering data. An interview allows one to explore someone else's experience and offers unique, unexpected and brilliant insights (Richards, 2006). This approach is generally a conversation in which the interviewer establishes a general direction for the conversation and pursues specific topics (Babbie & Mouton, 2001). Alldred and Gillies (2008) emphasise the fact that an interview is not a clear window into the interviewee's experience, but rather a joint production of a dynamic account by interviewer and interviewee.

Berg (2007, p.93) provides a figure that demonstrates three categories of interviews. According to Berg (2007) the degree of rigidity with regard to presentational structure defines the three categories.

Standardised Interviews

Most formally structured;

No deviations from question order;

Wording of each question asked exactly as written;

No adjusting of level of language;

No clarifications or answering of questions about the interview;

No additional questions may be added;

Similiar in format to a pencil-and-paper survey.

Semistandardised Interviews

More or less structured;

Questions may be reordered during the interview;

Wording ot questions flexible;

Level of language may be adjusted;

Interviewer may answer questions and make clarifications;

Interviewer may add or delete probes to interview between subsequent subjects.

Unstandardised Interviews

Completely unstructured;

No set order to questions;

No set wording to any questions;

Level of language may be adjusted;

Interviewer may answer questions and make clarfications;

Interviewer may add or delete questions between interviews

Figure 5.1. Interview structure continuum of formality (Berg, 2007, p.93)

As viewed in Figure 5.1. semi-standardised interview as used in this study can be found between the extremes of the completely standardised and the completely un-standardised interviewing structure (Berg, 2007). This form of interview allows new questions to be raised spontaneously by the interviewer, depending on what the interviewed person says (Jaccard & Jacoby, 2010).

A semi-standardised interview structure which was followed in the study entails the implementation of a number of predetermined questions. These questions were asked in a systematic and ordered fashion, allowing the interviewer the freedom to digress and to probe certain answers (Berg, 2007). Before each interview, I reread the definitions of the major constructs and key propositions in my proposed model as this allowed me to raise certain themes in the interview which were then tested by either asking the interviewer or telling interviewees about a thought and allowing them to comment.

The interview process followed the guidelines as proposed by Rule and John (2011, p.64) for conducting effective interviews:

- Establish a relaxed atmosphere for the interview;
- Explain the nature and purpose of the study;
- Allow interviewees to ask questions of clarification about the study and make sure that they are willing to proceed before you commence the interview;
- Inform participants of your ethical obligations;
- Adopt a conversational rather than inquisitorial style to build rapport;
- Begin with the least demanding or controversial questions;
- Listen carefully and avoid interrupting the participant;
- Be respectful and sensitive to the emotional climate of the interview;
- Probe and summarise to confirm your understanding.

After explaining the purpose and structure of the interview, emphasising the confidentiality and clarifying certain key concepts, participants were encouraged to share how they currently detect management fraud within their professional role. The second question allowed participants an opportunity to share why they thought managers engage in fraud. The propositions in the study were used to explore certain answers further and to guide the interview process. Appendix A is included and provides the structure of the interview process.

Due to the geographic dispersion of the second round participants, the researcher initiated contact via e-mail, explaining the purpose of the study and to request participant participation. Upon acceptance of their willingness to participate in the study, the same questions as posed to the first respondents together with the first theoretical model was sent to them via e-mail. After receiving their feedback, the participants were telephonically contacted at a time appropriate for them and a telephonic interview was conducted to clarify certain written answers.

Interviews were conducted from December 2012 till August 2013 and the average time for each interview was approximately 73 minutes. The semi-structured interview not only allowed me to explore certain key themes originating from the theory but also to gain interpretative experiences from the participants. Hence it was vital that all interviews be captured on record.

5.4. DATA COLLECTION AND STORAGE

All the interviews were recorded on a digital voice recorder which was then copied to my personal computer as voice recordings. Following the advice of Rapley (2004) and Seidman (1991; 2013), I transcribed the recordings myself after each interview as this allowed me to produce, verify and refine my own analytical hunches while concurrently producing a written description of the interaction which could be used for both further analysis and reports. The interviews were transcribed in full. In writing up the text, I included quotations of the verbal text to illustrate important points. Although the entire verbal text was transcribed, I did, however, play the recordings repeatedly and made notes of interesting and critical views (Seidman, 1991). Analysis of the data commenced during this stage by using coding procedures to discern patterns in the data. This study followed the qualitative comparative analysis (QCA) approach as proposed by Charles Ragin, who formalised the logic of the method using a Boolean approach (Bernard, 2013). Boolean algebra involves two states: true or false, present or absent; one or zero (Bernard, 2013). Hence if the participant agreed with the proposition a true value was assigned, while a false statement was assigned if the participant disagreed with the proposition. If the participant could not agree or disagree with the proposition, then the proposition was marked as qualifiable. Qualitative comparative analysis provides a simple and compact way of analysing patterns of causation in a small to moderate number of cases and looks at combinations of conditions found across a given set of cases (Lee & Fielding, 2004). All short notes made during each interview by the researcher were also coded to match the recordings.

To prevent losing any data, I made backups of all interviews, notes and completed chapters. Backups were saved on a CD and also saved on an external hard-drive. Both the CD's and external hard-drive were kept in my locked office, in a locked cupboard.

Having acquired and stored the data, the next decision to be made was how to analyse the data.

5.5. DATA ANALYSIS

Babbie and Mouton (2001) report that over the years qualitative researchers have developed a number of different methods and approaches to assist the qualitative researcher in understanding and evaluating data. However, no matter what process a researcher follows in analysing the data, the analysis can be divided into two broad categories. The first phase may be viewed as classification, while the second stage is about understanding (Oosthuizen, 2009).

During the classification phase there must be some form of transcription, indexing and coding process (Babbie & Mouton, 2001). That implies that the raw data must be transcribed from an original format that may include voice and video recordings, researchers' field notes, written and diagrammatical documents compiled by the participants. Following a top-down approach the descriptive categories used for coding were compiled from the literature (Patton, 2002; Wilkinson, 2003). Section 5.5.1. clarifies how the descriptive categories were compiled for this study.

Phase 2 comprises the understanding section and according to Brennan (2004), the interpretation phase occurs at all phases of the research and not only at the writing-up stage. Based on the classification of the data, the data can be compared, analysed and restructured separately into a new theory or conclusions, which is essentially the understanding section.

The next section describes the development of the theory on management fraud climate using an adapted methodology, as proposed by Dubin (1969; 1978). Phase 1 comprised the development of theory from the literature to assist the researcher in developing the descriptive categories that would be used in phase 2.

5.5.1. Phase 1: Classification Phase

The first part of the classification phase incorporated the five-step process as recommended by Dubin's (1969; 1978) model. The first five steps were followed in a structured sequence, as this allowed a conceptual theory to develop from the relevant literature. The core purpose, of this phase according to Lynham (2002), is to develop an initial conceptual framework based on the literature that provides an initial understanding and explanation of the nature and dynamics of the phenomenon under investigation. According to Dubin (1978) and Lynham (2002), the intended outcome of this stage is an explicit, informed conceptual framework that takes the form of a model and is developed from the theorist's knowledge of and experience with the phenomenon concerned.

Following the traditional approach in this study as recommended by Dubin (1978); Breakwell and Rose (2002) and Shoemaker et al. (2004), the first step was to describe the phenomenon systematically and thoroughly. The next step, according to Breakwell and Rose (2002) was to categorise the phenomenon, to indicate how specific instances are characterised by common attributes which make them capable of being treated in some sense as equivalent to one another. Berg (2007) and Shoemaker et al. (2004) emphasise the above point that, in order to construct theories, a researcher needs some smaller components or concepts. Berg (2007, p.20) and Shoemaker et al. (2004, p.15) refer to

the comment of Jonathan Turner who regards the nature of concepts as the "basic building blocks of theory". Berg (2007, p.20) defines concepts as "the symbolic or abstract elements representing objects, properties, or features of objects, processes or phenomenon". According to Miles and Huberman (1994), these concepts are formed not only from theory and experience, but also from the general objective of the study.

Therefore, following the advice of Berg (2009) and McTavish and Loether (2002), this study first aimed to define relevant concepts by examining the literature. Precise definitions of the concepts were required as unclear or vague definitions of concepts could create obstacles to the advancement of knowledge and science, as concepts rarely occur in isolation (McTacish & Loether, 2002; Sommer & Sommer, 2002). In terms of this study, concise definitions of management fraud and organisational climate were conceptualised in the literature review. These definitions aimed to highlight the difference between management fraud and the different types of fraud. Further, a definition of organisational climate was conceptualised. These concepts were then connected to one another in propositions. Hypothesising plays an important role in this process as the theory and empirical research are connected by means of hypotheses. Hypotheses represent testable propositions that are logically derived from theories (Sommer & Sommer, 2002). These propositions have two segments, according to McTavish & Loether (2002): how the concept is similar to other concepts and how it is different from them. The literature was used in this study to make assumptions about the interconnectedness of management fraud and organisational climate, and to compile a theoretical model.

An iterative approach was applied to Dubin's methodology in this study to conceptualise a refined and adapted model.

5.5.1.3) Boundaries of the theory (the boundaries within which the theory is expected to apply)

Dubin (1978) describes the boundaries of a theory as defining the domain over which the theory is expected to apply. The boundaries of a theory distinguish its theoretical domain from aspects of the world not addressed by the theory.

5.5.1.4) Systems states

Dubin (1978) defines a system state as a state in which all the units of the system assume featured values that have persistence through time, regardless of the duration of the time interval. All units of the system have values that are determinant, that is, are measurable and distinctive for that state of the system. A system that accurately represents a condition of the system being modelled has three characteristics, according to Dubin (1978): 1) inclusiveness (all the units of the system are included in the system state); 2) persistence (the relationship between the units persists long enough to allow the goodness of fit between them to be determined), and 3) distinctiveness (all units take on unique values for that system state).

5.5.1.5. Propositions of the theory (logical deductions about the theory in operation)

In order to achieve the aim of this the following core propositions with their various sub-propositions are deduced:

Proposition 1: **Determinants of organisational climate will have an effect on an employee's inclination to commit management fraud.**

The following individual determinants are proposed:

Proposition 1.1: Economic conditions will have an effect on the potential risk of management fraud;

Proposition 1.2: Leadership style will have an effect on the potential risk of management fraud;

Proposition 1.3: Organisational policies will have an effect on the potential risk of management fraud;

Proposition 1.4: Managerial values will have an effect on the potential risk of management fraud;

Proposition 1.5: Characteristics of members will have an effect on the potential risk of management fraud;

Proposition 1.6: Nature of business will have an effect on the potential risk of management fraud;

Proposition 1.7: Organisational size will have an effect on the potential risk of management fraud;

Proposition 1.8: Organisational life stage will have an effect on the potential risk of management fraud;

Proposition 2: **Dimensions of organisational climate as identified will have an effect on an employee's inclination to commit management fraud.**

The following dimensions are proposed:

Proposition 2.1: The individual's autonomy and will have an effect on the potential risk of management fraud;

Proposition 2.2:   The degree of structure will have an effect on the potential risk of management fraud;

Proposition 2.3:   The degree to which the organisation rewards or recognises an   employee will have an effect on the potential risk of   management fraud;

Proposition 2.4:   The freedom to communicate openly with members at higher

    organisational levels about sensitive or personal issues in the   hope that the integrity of such sensitive issues will not be violated,   will   have   an   effect   on   the   potential   risk   of management   fraud;

Proposition 2.5:   Cohesion within the organisational setting will have an effect on the   potential risk of management fraud;

Proposition 2.6:   The amount of pressure an individual experiences will have an   effect on the potential risk of management fraud;

Proposition 2.7:   Tolerance of members by management, will have an effect on the   potential risk of management fraud;

Proposition 2.8:   When employees perceive that change and creativity are   encouraged, as well as risk-taking, this will have an effect on the   potential risk of management fraud;

At this point phase 1 of the study was complete and phase 2, which comprises the understanding section, commenced.

5.5.2. Phase 2: Analysing the Data

The second part of the process digressed from Dubin's (1969; 1978) empirical validation section and utilised analytical induction to validate the propositions on which the model is constructed, as well as Lawshe's content validity ratio as a method for estimating content validity.

5.5.2.1. Analytical induction

In 1934 Znaniecki formulated an analytical induction process that can be used to verify theories and propositions based on qualitative data, by identifying universal statements and causal laws (Lee & Fielding, 2004; Taylor & Bogden, 1998). These statements seek to identify the essential features of a social phenomenon by identifying conditions always associated with the phenomenon (Lee & Fielding, 2004).

Analytical induction as introduced by Znaniecki, was viewed as an alternative to "enumerative induction" (or statistical generalisation), which provided correlations and could not account for exceptions to statistical relationships (Taylor & Bogden, 1998). According to Brannen (2004) the process of analytical induction progresses ideally from case to case and proceeds during the fieldwork.

The process of using analytical induction can be found in a number of classical examples that include the study by Lindesmith (1947) and Cressey (1950, 1953) on their respective studies of opiate addiction and embezzlers, and Becker's (1963) studies on marijuana smokers, namely *Other people's money* by Donald Cressey (1953, 1973) (Oosthuizen, 2009; Taylor & Bodgen, 1998). In South Africa, Oosthuizen (2009) describes recent applications of AI in the work of Tlou (case study on a gay senior officer in the South African National Defence Force); Barnard and Fourie (roles and contributions of Industrial Psychologists in South Africa), and Swarts (organisational practices which enhance the job attitudes of expatriates). Of particular relevance to this study is the research conducted by Barnard and Fourie (2007). These researchers investigated the role and contributions of industrial psychologists in South Africa. They conducted 23 interviews with registered industrial psychologists to gain their views in dimensions of a conceptual framework of organisational success developed earlier.

What is evident is that analytical induction as a data analysis method is not widely applied in South Africa, and where examples exist, Analytical induction was only used as a tool to analyse certain aspects of the qualitative data, as the different phases of Analytical induction were not applied in totality in any of these studies (Oosthuizen, 2009). Oosthuizen (2009) speculates that some of the above researchers did not fully comprehend the method and only perceived it as a form of inductive reasoning.

According to Smelser and Baltes (2001), analytic induction can be viewed as a research logic that can be used to collect data, develop analysis and organise the presentation of research findings. According to Smelser and Baltes (2001), its formal objective, is causal explanation, a measurement of the individually necessary and jointly sufficient conditions for the emergence of some phenomenon of social life. Silverman (2001, p. 237) refers to the work of Fielding who states that

having identified some "phenomenon" and generated some hypothesis, we can then go on to take a small body of data (a 'case') and examine it as follows:

one case is ... studied to see whether the hypothesis relates to it. If not, the   hypothesis is reformulated (or the phenomenon redefined to exclude the case).   While a small number of cases support practical certainty, negative cases   disprove the explanation, which is then reformulated. Examination of cases,   redefinition of phenomenon and reformulation of hypothesis is repeated until a   universal relationship is shown."

Bryman and Bell (2003, p.426) define analytical induction (AI) as "an approach to the analysis of data in which the researcher seeks universal explanations of phenomena by pursuing the collection of data until no cases that are inconsistent with a hypothetical explanation (deviant or negative cases) of a phenomenon are found", and offer a diagrammatical process flow of analytical induction.
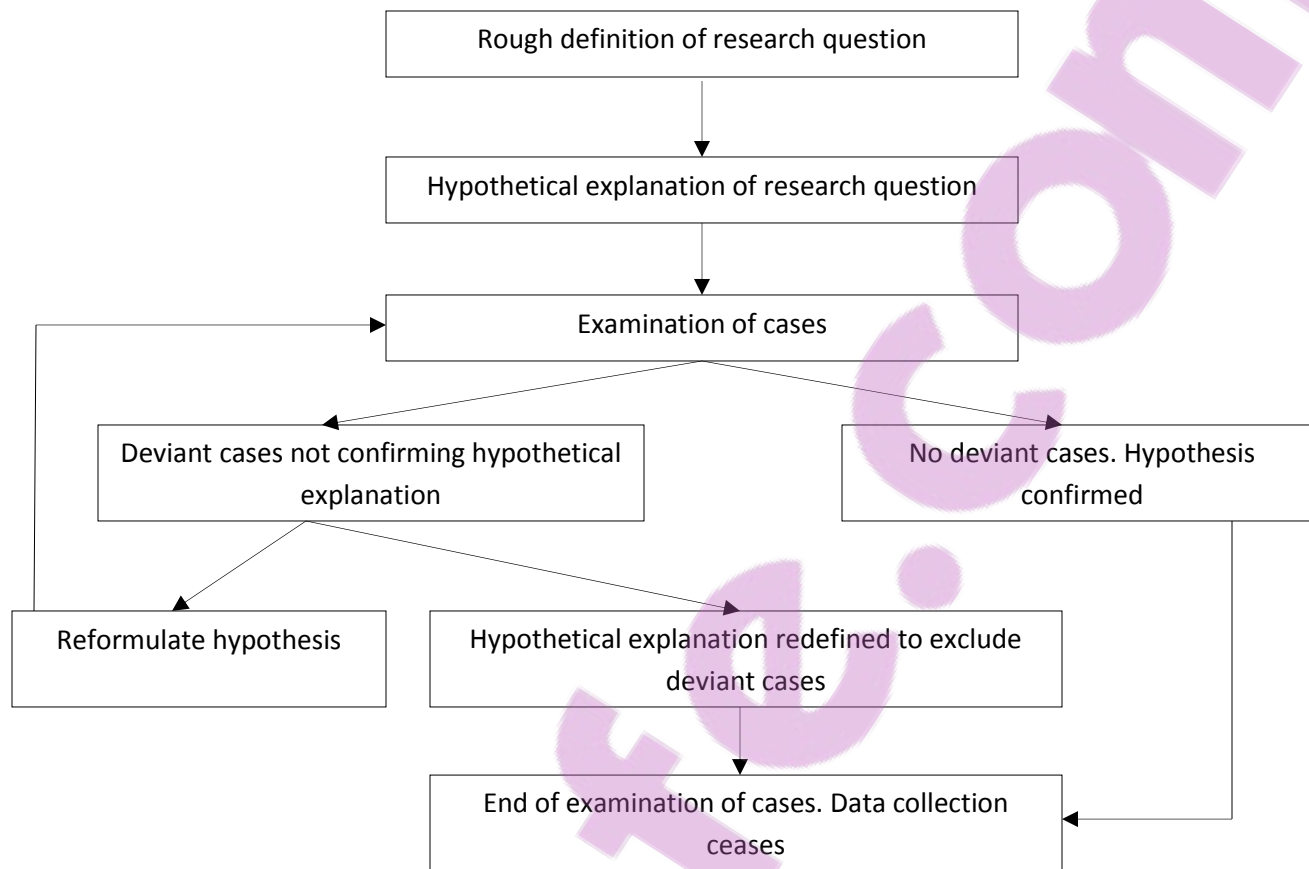
Figure 5.2. Diagrammatical process of analytical induction (Bryman & Bell, 2003, p.426)

The steps involved in analytical induction are described by Bernard (2013, p.491):

1. Start with a single case and develop a theory to account for that one case;
2. Look at a second case and see if the theory fits;
3. If it does, go on to a third case;
4. Keep doing this until you run into a case that does not fit your theory;
5. At this point, you have two choices: modify the theory or redefine the phenomenon you are trying to explain;
6. Repeat the process until your theory is stable, that is, until it explains every new case you try.

Figure 5.4 shows that analytical induction consists of stages and that every time the hypothesis is changed, new cases are examined against the changed hypothesis until no deviant cases are found (Bryman & Bell, 2003).

Gilgun (2001) made an important contribution to analytical induction when she described the 'immersion method' in which analytical induction should be used in theory building. Many of the theories developed by analytical induction describe relationships, hence Gilgun also calls analytical induction a "pattern or factor theory" (Gilgun, 2001, p.10). The value of such a pattern theory lies in its testability through new research as such theories are continuously open for modification and even rejection, as new information may contradict current knowledge. The theory is used to make sense of the evidence, while the evidence is used to refine the theory. It becomes a continual interplay between conceptual formulations and new ideas from subsequent observations. Gilgun (2001) elaborates on sources of hypotheses that the researcher wants to refine and states that hypotheses can be based on a thorough review of research and theory,

preliminary investigations in the field and even on hunches, intuition, experiences and descriptive hypotheses from related research and theory.

Criticism levelled at analytical induction is that it accounts for data already collected, but does not allow prediction about individual cases, and further theories derived from analytical induction only explain what is already known (Bernard, 2013). Because of the criticism of analytical induction, this study followed the qualitative comparative analysis (QCA) approach as proposed by Charles Ragin, who formalised the logic of the method using a Boolean approach (Bernard, 2013). Boolean algebra involves two states: true or false, present or absent; one or zero (Bernard, 2013). Qualitative comparative analysis provides a simple and compact way of analysing patterns of causation in a small to moderate number of cases and looks at combinations of conditions found across a given set of cases (Lee & Fielding, 2004).

5.5.2.2. Lawshe's Content Validity Ratio

Since its introduction in 1975, critical acceptance of Lawshe's content validity ratio has grown and is today still one of the most widely used methods for quantifying content validity (Newman, Lim & Pineda, 2013; Wilson, Pan & Schumsky, 2012). According to Haynes, Richard and Kubany as cited in Polit, Beck and Owen (2007), evaluating a scale's content validity is a critical early step in enhancing the construct validity of the instrument. Content validity concerns the degree to which a scale has an appropriate sample of items to represent the construct of interest (Polit et al., 2007). Lawshe's content validity ratio calls for the compilation of a set of subject matter experts who rate each of an instrument's items on a 3-point scale: a) "essential", b) "useful, but not essential" and c) "not necessary" (Wilson et al., 2012). This process is applied in the current study by using experts working in the field of management fraud. These experts were then asked to

evaluate the proposed fraud management model by focussing on the degree to which the elements of the model are representative of the factors influencing management fraud. In this study "essential" is accorded a true assessment in the Truth Table 5.3. and 5.4., while "useful, but not essential" is awarded a qualifiable false assessment, and "not necessary" is given a false evaluation.

A CVR value can be computed for each item on a scale as well as on the overall scale, with the following formula being used (Lawshe, 1975; Polit et al., 2007):

$$CVR = \frac{Ne - \frac{N}{2}}{\frac{N}{2}}$$

In which Ne is the number of SME's indicating "essential" and N is the total number of panelists. While CVR is a direct linear transformation from the percentage saying "essential," its utility derives from its characteristics:

- When fewer than half say "essential", the CVR is negative;
- When half say "essential" and half do not, the CVR value is zero;
- When all say "essential" the CVR is computed to be 1.00 (It is adjusted to 0.99 for ease of manipulation);
- When the number saying "essential" is more than half, but less than all, the CVR is somewhere between 0 and 0.99 (Lawshe, 1975, p.567).

Lawshe (1975) provides the following table indicating the minimum values according to the number of panelists, with only those items with CVR values meeting this minimum being retained.

Table 5.1. Minimum values of content validity ratio (Lawshe, 1975, p.568)

Number of Panelists	Minimum value *
5	.99
6	.99
7	.99
8	.75
9	.78
10	.62
11	.59
12	.56
13	.54
14	.51
15	.49
20	.42
25	.37
30	.33
35	.31
40	.29

* p = 0.05

It must be stated that, according to Lawshe, the use of the CVR method to reject items (i.e. elements of the fraud management model) does not preclude the use of other item analysis procedures for selecting those items to be retained (Lawshe, 1975). Based on this argument and for purposes of this study, analytical induction as an approach to the analysis of data, is principally used in this study to validate the propositions on which the model is constructed, although Lawshe's content analysis provides additional verification information concerning the acceptable evidence of content validity.

5.6. REPORTING

Silverman (2005) emphasises that the starting point for reporting data presentation is to know the audience you are writing for. If you want to write an academic reference book, it should contain structured arguments, while if you want to compile a report that will attract and interest a general audience it should contain all sorts of visually stimulating material (Silverman, 2005). Reporting on the data should, however, be the core of the report and all sections and subsections should have bearing on the focus of the report (Oosthuizen, 2009). Strauss, as cited in Flick (2009, p.414), states that the presentation of a theory requires: "(1) A clear analytical story. (2) Writing on conceptual level, with description kept secondary. (3) The clear specification of relationships among categories, with levels of conceptualisation also kept clear. (4) The specification of variations and their relevant conditions, consequences, and so forth, including the broader ones".

Flick (2009) suggests that in order to achieve these goals, the first step for a researcher is to outline a logical draft of the theory, before providing a clear summary of the central outline of the story. The third step, according to Flick (2009) is to make a visual presentation to clarify the central concepts and lines of the developed theory.

Reporting in this study will be done by using structured arguments to support the application of Dubin's methodology. After visually presenting the initial conceptual model, a hypothetical contingency table is used to link the concepts to each other. The study then explores the rationale for the hypothetical values as assigned in the contingency table by examining the link between the various climate determinants and dimensions and management fraud. The conceptual model is then visually presented and assessed through analytical induction and Lawshe's content validity ratio. Feedback in terms of the findings of analytical induction and Lawshe's content validity ratio is reported in table format.

5.7. SUMMARY

This chapter examined how the sampling of participants in this study was conducted, by exploring both the basis behind the sampling approach and the selection of the participants. This chapter further explored the measuring instrument used in this study, before clarifying the procedure on how the data was collected and stored. The two broad categories of data analysis were discussed before mentioning how the data will be reported.

CHAPTER 6: FINDINGS

6.1. INTRODUCTION

After applying Dubin's five steps to this study the conceptual model is then assessed through analytical induction, Lawshe's content validity and feedback from the participants. The adapted model is then assessed through a second round of feedback, to establish the applicability and validity of the conceptual model and the final model is then presented.

6.2. EXAMINATION OF CASES

This study followed the qualitative comparative analysis (QCA) approach as proposed by Charles Ragin, who formalised the logic of the method using a Boolean approach (Bernard, 2013). Boolean algebra involves two states: true or false, present or absent; one or zero (Bernard, 2013). Table 6.1. presents feedback from the participants in terms of propositions 1.1. to 1.8. expressed in a truth table, while Table 6.2., provides feedback from the participants in terms of propositions 2.1. to 2.8. Both tables also provide the CVR values of each dimension and determinant.

Table 6.1. Truth table representing participant's feedback in terms of organisational climate determinants

Research Participant	Determinants of Organisational Climate							
	ECC	LS	OP	MV	CM	NB	OS	OLS
RP1	T	T	T	T	T	F	T	T
RP2	F	T	T	T	T	T	F	T
RP3	T	T	T	T	T	F	F	T
RP4	T	T	T	T	T	T	T	T
RP5	T	T	T	T	T	T	F	T
RP6	T	T	*F	T	T	F	T	T
RP7	F	T	T	T	T	T	F	F
RP8	T	T	T	T	T	T	T	T
RP9	F	T	*F	T	T	F	T	T
RP10	F	T	T	T	T	T	T	T
RP11	T	T	T	T	T	T	F	F
RP12	T	T	T	T	T	T	T	T
RP13	T	T	T	T	T	T	T	F
RP14	T	T	T	T	T	T	T	T
RP15	T	T	T	T	T	T	T	T
RP16	T	T	T	T	T	T	T	T
RP17	T	T	*F	T	T	T	T	F

CVR	.53	.99	.65	.99	.99	.53	.41	.53

* qualifiable (T = true ; F=False)

(ECC = economic climate conditions; LS = leadership style; OP = Organisational policies; MV = Managerial values; CM = Characteristics of members; NB = Nature of business; OS = Organisational size; OLS = Organisational life stage; CVR = Content validity ratio)

Table 6.2. Truth table representing participant's feedback in terms of organisational climate dimensions

Research Participant	Dimensions of Organisational Climate							
	IFA	RTB	REW	COM	COH	PRE	TOL	INN
RP1	T	T	T	T	T	T	T	T
RP2	T	T	T	T	T	T	T	T
RP3	T	T	T	T	F	T	T	T
RP4	T	T	T	T	T	T	T	T
RP5	T	T	T	T	T	T	F	T
RP6	T	F	T	T	F	T	T	T
RP7	T	T	T	T	T	T	F	T
RP8	T	T	T	T	T	T	T	T
RP9	T	T	T	T	*F	T	T	T
RP10	T	T	T	T	T	T	T	T
RP11	T	T	T	T	T	T	F	T
RP12	T	F	T	T	T	T	T	T
RP13	T	F	T	T	T	T	F	T

RP14	T	*F	T	T	F	T	F	T
RP15	T	T	T	T	T	T	T	T
RP16	T	T	T	T	F	T	T	T
RP17	T	T	T	T	T	T	T	T
CVR	.99	.53	.99	.99	.53	.99	.41	.99

* qualifiable (T = true ; F=False)

(IFA = Level of individual autonomy; RTB = Degree of structure; REW=Reward system; COM=Degree of open communication; COH= Team and group cohesion; PRE= Perceived level of pressure; TOL; Warmth and support; INN= Level of risk taking; CVR = Content validity ratio)

From table 6.1. it is evident that, according to Lawshe's content validity ratio (see table 5.1.), all CVR values satisfy the 5% level and therefore in terms of Lawshe's method, could be retained in the model. However, the results obtained from analytical induction takes precedence over CVR. It is clear that based on the feedback received from the research participants (based on the results from analytical induction), that the following determinants of organisational climate will have an effect on an individual's decision to commit management fraud:

- leadership style;
- organisational policies;

  (Although a CVR value of .65 was obtained on this determinant, all participants agreed that organisational policies do have an effect, but emphasised the implementation and regulation of the policies as key in determining whether management fraud will occur or not. Therefore, applying analytical induction as a method of validation, resulted in proposition 1.3 being amended to: The implementation and regulation of organisational policies will have an effect on an individual's inclination to commit management fraud.)

- managerial values, and
- characteristics of members.

In terms of table 6.2., it appears as though all the participants in the study agree that all the organisational dimensions, except degree of structure (CVR = .53) and warmth and support (CVR = .41), will have an effect on an individual's inclination to commit management fraud.

6.3. SUPPORTIVE EVIDENCE FROM INTERVIEWS CONDUCTED

The findings are discussed further in Table 6.3., which provides supportive evidence in the form of transcribed evidence from the interviews conducted. Table 6.3. should be interpreted concurrently with Table 6.1. and section 4.2.2.1. which

provides a theoretical rationale for the numerical value of the proposition. A further theoretical discussion will follow after reporting on the second round of feedback. Although all interviews were transcribed in full for reporting purposes only, certain key aspects will be provided. Furthermore, for reporting purposes certain answers from the participants were translated from Afrikaans to English.

Table 6.3. Supportive evidence in terms of organisational climate determinants

Supportive evidence	
Propositions	**Interviews**
Economic conditions	RP1: "I think everyone is feeling the economic strain, so managers just like everyone else sometimes need to find ways to support their lifestyles. So yes, I do think economic conditions play role" RP5: "Definitely, it goes about lifestyle, and the Jone's next door live like that and I want to live the same, although I can't. Greed, greed and greed is a major factor affecting fraud." RP6: "Unfortunately in the Free State, our economy is declining because of lack of service delivery, because of greed and a lack of leadership, and as a result managers fight for limited resources

	and use any means necessary to get these limited resources."
	RP7: "They are not aware of economic conditions, it's just plain greed."
	RP9: "People steal even if it is going well."
	RP10: "Managers don't need the money, they earn enough."
	RP14: "Everything just increases, petrol, school fees and food. The only thing that does not increase is our salaries. So people need to find ways to support themselves. You cannot live from one's salary anymore, because life has become too expensive. So yes the economic condition, plays an important role."
Leadership style	RP3: "Through the strategic plan, a person can see how seriously the leaders take fraud."
	RP4: "Lenient managers who don't keep to the regulations themselves will result in employees doing the same."
	RP6: "Most definitely, he is in a leadership position and you expect

	him to act correctly, but you don't see leaders often behaving correctly and them employees do the same and no-one understands why." RP8: "Definitely, most definitely. RP11: "Everyone just looks at the manager for guidance. If she bends the rules just a little, then everyone also bends the rules just a little." RP14: "If your leader is corrupt then he points the direction."
Organisational Policies	RP3: "The most vital part of a fraud strategy is a sound and effective fraud policy, but is must be communicated to all people on all levels." RP6: "We can only make recommendations to senior management in terms of policies, and there are times when management overrides the stated policies, and this happens often." RP9: "The lack of organisational policies and the way it is implemented and the way in which people keep to the policies. In the government sector we have polices which are in line with the

	best in the world, but not always applied by managers. The application of policies is the key point. Policies on paper does not mean anything."
	RP12: "Good, tight, enforceable policies, makes people think twice."
	RP17: "They are up there, they are the one controlling everything, they can manipulate everything. They do not need to sign anything, the junior staff are the ones who sign and then the managers benefit."
Managerial values	RP3 "If one manager does not have ethical values, then the whole organisation becomes sick."
	RP4: "In every strategic plan the values are listed integrity, honesty, value for money. If you develop a strategic plan, then you at least expect management to comply with this plan. But you don't see these values in management's behaviour."
	RP8: "People look up to management, and if they are behaving in a certain way, then people copy that behaviour."

	RP11: "A fish always, and I mean always rots from the head."
	RP17: "The values of managers, spill into all aspects of the organisation. Employees always look up."
Characteristics of members	RP3: "The older the workforce, the greater the chance of fraud. Older people do not want to change, it worked that way when I started. People who commit fraud are cleverer than you and I, and people who commit fraud see the opportunity and take it."
	RP4: "Older employees are sometimes because of politics placed in positions that they are not able to do. And then this manager realises that he has only a few years to get rich. So yes he takes chances and also helps his friends to get rich."
	RP8: "The longer you have been in the business, the more comfortable you are with the rules, and you know where the gaps are."
	RP12: "I think men in power positions can force more people to help them commit fraud. Men are more ruthless than woman."

Nature of business	RP1: "Fraudsters don't discriminate they look for opportunities in any organisation".
	RP3: "I think any organisation or department has risk of fraud. Both people working within the department and people outside the organisation work together to commit fraud."
	RP 4: "Certain businesses will attract more fraud. Fraudsters know where the money is and quickly find ways to get the money."
	RP9: "I don't think so fraud can happen in any organisation".
	RP4: "People know which departments work with more money and then they target these departments."
Organisational size	RP6: "Smaller businesses probably suffer more, since they don't have departments such as an internal audit department, who manages and enforces stringent control."
	RP7: "The more people in an organisation, the greater the chance of fraud, but fraud also happens in small organisations, so it can

	play a role, but it is dependent on other factors: polices, reward systems and procedures." RP10: "Smaller amounts of fraud are not so easily detected in large organisations, but will be picked up in small organisations. So yes larger organisations loose more small amounts of money, which are never detected and if ever detected then they are written off." RP11: "The bigger the organisation becomes, the more cumbersome and difficult control becomes."
Organisation's life stage	RP2: "Old organisations, like government is more prone to fraud, as all the paperwork and employees increase the likelihood of fraud." RP5: "Fraudsters will sometimes tackle new organisations, in the forms of cheque fraud or fake cash deposit." RP7: "Younger organisations don't always have the controls, especially if they don't appoint the correct person in the beginning, and then only when fraud happens for the first time, then they start looking at closing the loopholes."

	RP13: "I don't think that plays a role, as newer organisations have fewer members, while older organisations have more members but usually also more controls."
	RP17: "Organisational life stage, has the least effect although it still has an effect, as can be seen on the Report to the Nations."

Transcribed sections of the interviews conducted were mentioned in Table 6.3. This table focusses on the determinants of organisational climate and the role they play in management fraud. Table 6.4. focusses on organisational climate dimensions and the role these dimensions play in management fraud and must be read in conjunction with Table 6.2. This table will again only highlight certain key aspects of the interviews conducted and should be interpreted in conjunction with section 4.2.2.1. which discusses the theoretical rationale for the numerical values assigned to the respective proposition. A further theoretical discussion will be presented after the second-round of interviews.

Table 6.4. Supportive evidence in terms of organisational climate dimensions

Supportive evidence	
Level of individual autonomy	RP3: "Yes, but it depends on the individual, it goes about moral values, the background which you come from."
	RP4: "A fish is free in the water, but take him out of the water and he is no longer free."
	RP5: "It boils down to the person, but we can reduce the temptation, by reducing the autonomy."
	RP8: "The more autonomy a person has, the greater the chance of a person being persuaded to commit fraud."
	RP12: "
Degree of structure	RP6: "More specialised jobs, require more specialised controls"
	RP8: "Yes it will have an effect if there is an emphasis on structure in terms of red-tape and bureaucracy."

	RP11: "Bigger companies have more centralised structures, which must approve any financial decision taken by local manager, which reduces the risk."
Reward system	RP1: "Definitely, If you are paid for what you are worth then there will be less fraud; fairness in terms of pay is important.

RP4: "Reward plays a role in the climate created. If an organisation does not pay me fairly, then I will look for opportunities to get my own reward"

RP7: "Managers use reward systems to benefit themselves, there must be transparency."

RP9: "Sometimes managers only give reward to employees on the condition that the employees pay the manager or his family a portion of the bonus." |
| Trust / Degree of open communication | RP3: "Will have positive impact, unless leaders are unethical. But there should be open communication." |

	RP15: "The most vital part of a fraud strategy is a sound and effective fraud policy, but is must be communicated to all people on all levels." RP16; "If I trust my manager then I am more willing to share with her if I see something happen in my organisation, but if I don't trust her then I will rather keep quiet."
Cohesion	RP3: "Yes it can, if I do step 1 and you do step 2, and if we are buddies then we can help each other. But it comes back to personal values, so I don't think cohesion really plays a role" RP5: "If I have a close relationship with someone higher up, then both can benefit from fraud. He gets his cut, and I get my cut, and we won't split on each other." RP6: "If we braai together on Saturday then it becomes difficult for me to report you on Monday, so yes it might play a role." RP9: "It goes both ways: when a person acts differently from the group, then the group will identify him and realise that he is not one of us. But also if there is no group cohesion, everyone will work on

	their own which can also lead to an increase in fraud."
Perceived level of pressure	RP3: "Yes it will have an effect." RP5: "Even mentioned in fraud triangle, so yes." RP9: "Easy one, yes." RP14: "Definitely most definitely."
Warmth and support	RP5: "A change in management style can indicate fraud." RP6: "A caring manager, might not wish to say no." RP14: "No, if my manager cares for me, then it does not imply fraudulent behaviour."
Level of risk taking	RP4: "A person takes a first chance then gets away with it, and then shifts the boundaries, which sometimes leads to this person bending or breaking the rules". RP7: "If management is seen as taking risks, then employees will

	also start taking small risks, which then leads to pushing, what is acceptable versus what is not." RP10: "Small risks lead to bigger chances."

6.3.1. Reflection on the Feedback Received Through the Interviews Conducted

Based on the feedback received through the interviews, I amended the conceptual model to accommodate the feedback of the participants. The changes included excluding determinants and dimensions (See figure 6.1.). Proposition 1.3. was not deleted but amended to emphasise the implementation of organisational policies.

In addition, after carefully reflecting, on the general feedback from RP5: *"Not sure about the position of potential risk of management fraud block, should it not be placed before you get to the fraud triangle. If management can deal with those red flags early then their won't be a potential risk of management fraud"*, the researcher decided to substitute the block indicating management fraud climate with direction of climate and then the block indicating potential risk of management fraud with strength of management fraud. This amended model is presented in Figure 6.1. and the changes are presented in italics.

However it is important to note that for purposes of this study the organisational climate determinants and dimensions will only be empirically validated, while the components right of the block "management fraud climate" were only inferred from the literature and were not validated in this study."

Determinants of Organisational Climate

Economic conditions
Leadership style
Implementation of organisational policies
Managerial values
~~Organisational structure~~
Member characteristics
~~Nature of business~~
~~Organisational size~~
~~Organisational life stage~~

Dimensions of Organisational Climate

Individual autonomy
~~Degree of structure~~
Organisational rewards
Trust
~~Group and team cohesion~~
Perceived individual pressure
~~Warmth and support~~
Risk taking

Direction of Climate

Opportunity

Pressure

Moderating factors
Gender
Tenure
Education
Age

Capability

Rationalisation

Strength of Management Fraud Climate

Figure 6.1. Third conceptual model indicating laws of interaction

Working from left to right, this model assumes that there are certain organisational climate factors (Determinants and Dimensions) within an organisation that can provide an indication of the direction of climate within an organisation. The direction refers to whether employees perceive that a high level of management fraud is appropriate, acceptable or even tolerable in the organisation. This model further assumes that although the acceptance and/or tolerance as perceived by employees may be high, not all managers will engage in fraud, as the various aspects of the fraud diamond also impose a form of constraint on the organisation. The level of individual constraint as imposed by the fraud diamond is moderated by an individual's gender, tenure, education and age. These moderation factors are supported by research conducted by ACFE (2009, 2012); Murcia and Borba (2007); and Ramamoorti et al., (2009) who state that the majority of white collar crimes are committed by well educated (formal education), middle aged (45-55 years), men and women (males account for little more than half of all incidents), who have a long tenure (10-15 years). Hence, the probability of committing management fraud or strength of climate will be higher when both climate factors (to the left of this model) and individual factors (as depicted in the fraud diamond) are present and interacting.

6.3.2. Second-Round Feedback from the Research Participants

In line with a common practice in qualitative studies, I solicited additional feedback on the conceptual model from 9 research participants at this point. According to Johnson (1998), classical analytical induction would normally end after the

theoretical explanation of the phenomenon concerned and an inductively reached conclusion based on empirical data. Nevertheless, in his own research Johnson (1998) collected more data to test his theory in order to address some of the criticism aimed at classical analytical induction. Schurinck (2012) also calls for testing one's theoretical explanation against extra cases to establish if generalisation can be achieved or if there are still negative cases.

These 9 participants were all registered as Certified Fraud Examiners. The model as indicated in Figure 6.1. was e-mailed to them and they were requested to review the model and indicate whether they agreed with the propositions of the study, and whether they had any additional feedback in terms of the proposed model. Feedback was received from 6 of the research participants. Feedback is presented in Table 6.5.

Table 6.5. Responses from second round of feedback from the research participants

Research Participant	Feedback
RP18	"No change recommended. Workable model."
RP19	"The list accounts for the different types of determinants and dimensions I have observed during my years as a fraud investigator."

RP20	"The ACFE refers to the fraud model as the fraud triangle and not the fraud diamond. I believe that the characteristics and points named under capability fall under opportunity and pressure. I have seen this model with one or two other academics although they use knowledge/expertise/professionalism and not capability. I still need to be proven that we are dealing with a diamond or kite model."
RP21	"I will not delete any dimensions but maybe add organisational values. You do have managerial values, but sometimes these are in conflict with one another; The "process" of fraud is a complex one and a multitude of factors generally play a role; Great approach, would like to see your final work."
RP22	"I would add informal sub-cultures to the determinants of organisational climate; I would add the following to the dimensions that play a role in management fraud: • Delegation of authority and mandates • Company and corporate informal sub-cultures

	• Company values and ethics
	• Top-down and bottom-up employee engagements.
	Model is similar to the effect of seasonality in terms of spheres of business – i.e. higher crime rate in summer, higher sales and transactions over Easter and Festive – employees including management also experience the effect of seasonal behaviour. The levels of concentration and propensity for mistakes, blatant disregard of policies and procedures and fraud, are cyclical. Internal and management fraud risk increases during lower peak periods when employees have capacity and time available to investigate and test systems and policies."
RP23	"All factors (dimension and determinants) mentioned play a role, although I would include the following determinant: Ethical values entrenched, and in the moderating factors I would include the history of the organisation in dealing with similar cases."

6.3.2.1. Reflection on the second round feedback received

Based on the feedback received from RP21 and the view of Fraedrich et al. (2011), that organisational values have a greater influence on decisions than an individual's own values, the researcher decided to include organisational values as

a key determinant of the direction of the climate. Just as organisations dictate behaviour in the workplace, so organisations should prescribe ethical behaviour (Greenberg, 2010).

This researcher also carefully considered the feedback from RP20, in terms of the usage of the fraud diamond. According to Dorminey et al. (2012), the essential traits thought necessary for committing fraud, especially over a long period of time, with large sums involved, require a combination of intelligence, position, ego and ability to deal with stress. Additionally the potential fraudster must have sufficient knowledge to understand and exploit internal control weaknesses and to use position, function or authorised access to his advantage (Dorminey et al., 2012). Hence capability likely affects the probability that an individual will be able to exploit opportunities of the organisation and modifies the opportunity construct by limiting opportunity to a small set of individuals (Dorminey et al., 2012). Capability seems to compliment several conclusions from the ACFE report and the 2007 KPMG report. Capability adheres to right mix of given and acquired traits of an individual, with both the ACFE and KPMG report highlighting several traits and qualities of a perpetrator: 1) more men than woman occupy positions of authority in business organisations which provide them greater access to assets 2) older employees tend to occupy higher-ranking positions and therefore generally have access to company assets 3) fraudsters were better educated and 4) remained longer in the organisation (ACFE, 2009; ACFE, 2012; Kassem & Higson, 2012; KPMG, 2007; Murcia & Borba, 2007; Ramamoorti et al., 2009; Tugas, 2012). Further, Dorminey et al., (2012) and Tugas (2012) argues that the triangle model alone is not sufficient to deter, prevent and detect fraud, as two sides of the fraud triangle (pressure and rationalisation) cannot be observed and important aspects such as fraudsters capabilities are ignored. Therefore capability is maintained in this conceptual model as an important addition to the fraud triangle. In order to clarify capability further and to reduce uncertainty, this model also includes individual factors that will

have an impact on an individual's capability to commit fraud. For a detailed description of how these factors influence a manager's decision to commit fraud, please refer to section 2.7.1.

In terms of RP22's feedback, the researcher feels comfortable that the recommended dimensions are already included into the model under different descriptions. RP22 recommended that "delegation of authority and mandates" be included. The description of this dimension is included under the "level of individual autonomy" in the model. Further the dimension as indicated by RP22 "company and corporate informal sub-cultures" is integrated in the "direction of climate". "Company values and ethics" is embraced in the model as "organisational values" while top-down and bottom-up employee engagements is comparable to "degree of open communication between employees and management".

Determinants of Organisational Climate

Leadership style
Implementation of organisational polices
Managerial values
Member characteristics
Organisational values

Dimensions of Organisational Climate

Individual autonomy
Organisational reward
Trust
Perceived individual pressure
Risk taking

Direction of Climate

Pressure

Opportunity

Moderating factors
Gender
Tenure
Education
Age

Rationalisation

Capability

Individual Personal Traits

Ego strength
Individual decision making
Cognitive moral development
Values (Individual & Work)
Locus of control
Machiavellianism
Pecuniary self-interest
Self-control
Self-efficacy

Strength of Management Fraud Climate

Figure 6.2. Fourth conceptual model indicating laws of interaction

							Organisational life stage
							Risk taking

Working from left to right this model assumes that there are certain organisational climate factors (determinants and dimensions) within an organisation that can provide an indication of the direction of climate within an organisation. The determinants include:

- **Leadership style**:

    As top managers set the ethical and moral tone of the organisation, they need to set high ethical standards, demonstrate those standards through their own behaviour and encourage and reward integrity (Robbins & Judge, 2011). Leaders need to behave ethically in their everyday talk, decisions and actions, as the tone at the top as expressed through the words and actions of senior executives, plays a vital part in setting the standard of behaviour in an organisation (Bishop & Hydoski, 2009; Toor & Ofori, 2009). According to Aguilera and Vadera (2008) and Zahra et al. (2007), the influence of the CEO becomes even more significant when the CEO is particularly charismatic. Charismatic quality leads to greater identification, trust and reflexive obedience by subordinates (Zahra et al., 2007; Zona et al., 2012). Subordinates often mimic the charismatic leader's behaviour. Charismatic leaders usually build coalitions on unquestioning followers who fail to probe their leader's failings (Zahra et al., 2007).

- **Implementation of organisational policies**:

    The perception of climate in an organisation is dependent on organisational policies and procedures (Hicks-Clarke & Iles, 2000; Jones, 1986), and the majority of participants emphasised the implementation and regulation of organisational policies as a key determent in detecting management fraud through climate.

- **Managerial values:**

Although the literature is unclear in terms of tying specific values to specific unethical acts, it is acknowledged that there are a number of potential ethical values which an organisation can choose (Schwartz, 2013). It is argued by Schwartz (2013) that an organisation should choose those ethical values that are considered universal in nature. To the greatest extent possible, values chosen by the organisation should retain the significance despite differences in culture, religion, time and circumstances. Diverse individuals and social groups within the organisation should view the values a being foundationally important in guiding or appraising behaviour, policies and actions (Schwartz, 2013). Schwartz (2013, p.42) proposes the following universal core ethical values:

- Trustworthiness, including honesty, keeping promises, integrity, transparency, reliability and loyalty;
- Respect, including respect for human rights;
- Responsibility, including accountability, acknowledging mistakes and not blaming others;
- Fairness, including notions of process, impartiality and equity;
- Caring, including sensitivity towards others and avoiding unnecessary harm;
- Citizenship, including obeying laws, assisting the community, and protecting the environment.

- **Characteristics of members:**
Section 2.7.1. emphasises that the majority of white-collar crimes are committed by:
- well educated people (formal education),
- middle aged persons (45-55 years),
- both men and women (males account for slightly more than half of all incidents),
- employees who have a long tenure (10-15 years) with the organisation,
- those who are often in a position of trust and

- persons who have no criminal history (90% have no criminal record) (ACFE, 2009; ACFE, 2012; Murcia & Borba, 2007; Ramamoorti et al., 2009).

- **Organisational values:**

  This determinant was added to the model based on feedback received during the second round of interviews and, according to Victor and Cullen as cited in Appelbaum et al. (2005), organisational values are those values that determine what is considered ethically correct. Factors affecting the values of the organisation include amongst others:

  - personal self-interest,
  - company profit,
  - operating efficiency,
  - team interest,
  - friendships,
  - and one of the most important, according to Sims, is the actual behaviour of top management (Appelbaum et al., 2005; Erben & Güneser, 2008).

The following dimensions were identified:

- **Autonomy:**

  Autonomy affords senior managers the opportunity to commit and conceal fraud (Zahra et al., 2007). Worse still, when an unethical person holds the two important positions at once, he/she can get away with committing fraud and concealing it (Zahra et al., 2007).

- **Reward/Recognition:**

  Behaviour modification research conducted in organisations, clearly indicates that reinforcement contingencies are vital in soliciting desired behaviour from

employees, with research explicitly supporting the idea that successful policy implementation, including social and ethical policies, is not likely to occur unless the behaviour is linked to the reward system (Worrel et al., 1985). The reinforcement system of an organisation must support ethical behaviour and employees should be rewarded for ethical behaviour and punished for unethical behaviour (Stead et al., 1990).

- **Trust:**

  Bishop and Hydoski (2009, p.72) provide four simple ways for management to set the correct ethical tone in an organisation: 1) communicate what is expected of employees; 2) lead by example; 3) provide a safe mechanism for reporting violations; and 4) reward integrity.

- **Perceived individual pressure:**

  Fraud does not begin with dishonesty, but commences with pressure that can take a number of forms at both the executive and employee levels (Goldman, 2010; Ramamoorti & Olsen, 2007). Research conducted by Albrechts and Romney (1986); Bell and Carcello (2000); Eining, Jones and Loebbecke (1997); and Wells (2005), suggests that excessive pressure on an organisations executives to meet targets set by the board of directors might evoke an environment favourable to fraud (Murdock, 2008; Murcia & Borba, 2007). Brewer (2008) implies that fraud often starts simply as good people coming together to create business solutions to satisfy some demand which is caused by external forces, and as the pressure increases, so does the creativity or innovation of the solutions (Brewer, 2008). This pressure is the first step that results in the individual considering fraud seriously (Rezaee & Riley, 2010).

- **Risk taking:**

    Ethical leadership is based on trust and fairness (Brown, 2007). Researchers studying organisations have discovered that trust and fairness are related to a number of positive attitudes, behaviours and outcomes for organisations (Brown, 2007).

The direction refers to whether employees perceive that a high level of management fraud is appropriate, acceptable or even tolerable in the organisation. This model further assumes that although the acceptance and/or tolerance as perceived by employees may be high, not all managers will engage in fraud, as the various aspects of the fraud diamond also imposes a form of constraint in the organisation. The level of individual constraint as imposed by the fraud diamond is moderated by an individual's gender, tenure, education and age, which form part of an individual's capability and make up the acquired traits of an individual. Apart from the biographical traits mentioned, the model includes personal traits that will also impact on an individual's capability. Hence, the probability of committing management fraud or strength of climate will be higher when both climate factors (to the left of this model) and individual factors (as depicted in the fraud diamond) are present and interacting.

6.4. SUMMARY

In this chapter, the initial conceptual management fraud climate model was presented, by applying the first five steps of Dubin's methodology. After the concepts were conceptualised, they were linked to each other through a hypothetical contingency table. The study then explored the rationale for the hypothetical values as assigned in the contingency table by examining the link between the various climate determinants and dimensions and management fraud. After applying Dubin's five steps to this study, the conceptual model was then assessed through analytical induction, feedback from

the participants was provided to establish the applicability and validity of the conceptual model, and the final model was presented.

CHAPTER 7: CONCLUSIONS, SHORTCOMINGS AND RECOMMENDATIONS

7.1. INTRODUCTION

This chapter provides an overview of the study before focussing on how the proposed conceptual model can be utilised in detecting management fraud. Shortcomings within the current study are acknowledges, before proposing possible research initiatives that can be followed to address the identified shortcomings. The last section of this chapter explores whether the aims of the study were achieved.

7.2. OVERVIEW OF THE STUDY

The focus of **Chapter 1** was to provide motivation for and background to the research. The considerable impact of management fraud on the global and national economy and the deficiencies of the current detection models were highlighted. After stating both the general and specific aims of the study, it was discovered that an interpretative framework with a post-positivism approach was the most suitable for the study. This chapter also indicated how quality in terms of the literature review and empirical study was ensured.

Chapter 2 was divided into two sections. The first section focussed on fraud in general and commenced by examining the historical context of fraud before providing a conceptualisation of fraud. The various types of fraud an individual may encounter in organisations were then classified into manageable categories before examining the conditions under which fraud may occur. The focus of the second section of Chapter 2 then shifted to a particular type of fraud, namely management fraud, and explored the historical context of this specific type of fraud before providing the following management fraud definition: "A group of knowledgeable, highly educated perpetrators, who are in a position of power, trust, respectability and responsibility, who through well

planned collusive schemes, abuse the trust and authority normally associated with the position for personal and/or organisational gains." From the literature it was discovered that that the majority of white collar-crimes are committed by well educated (formal education), middle aged (45-55 years), men and women (males account for little more than half of all incidents), who have a long tenure (10-15 years) with the organisation, who are often in a position of trust and have no criminal history (90% have no criminal record). The chapter then focusses on how management fraud is currently detected and prevented and the need for alternative behaviouristic prevention/detection approaches was emphasised.

In **Chapter 3** the focus was on organisational climate and commenced by examining the historical context of organisational climate, before conceptualising organisational climate as: "The relatively enduring and shared perceptions of feelings and attitudes that organisational members have about fundamental elements of the organisation, which reflect the established norms, values, and attitudes of the organisation's culture and influences individuals' behaviour positively or negatively". Due to the conceptual complexity of this construct, this chapter examined the nature and formation of this multi-level and multi-dimensional construct, before distinguishing organisational climate from culture. The different types and classification of climates were examined, prior to studying the factors affecting organisational climate. The last section of this chapter examined the levels of climate and established the link between organisational climate and ethical climate. The focus of this chapter then shifted to a specific level of organisational climate, namely ethical climate. The difference between ethical climate and culture was examined, and the chapter ends by examining previous research on ethical climate.

In **Chapter 4**, the initial conceptual management fraud climate model was presented, by applying the first five steps of Dubin's methodology. The concepts were linked to one another through a hypothetical contingency table. The chapter then explored the

rationale for the hypothetical values as assigned in the contingency table by examine the link between the various climate determinants and dimensions and management fraud.

Chapter 5 examined how theoretical convenience sampling, which was supplemented by snowball sampling, was used in this study. This chapter further explored how interviews were utilised in this study, before clarifying the procedure as to how the data was collected and stored. The two broad categories of data analysis according to Dubin and analytical induction were discussed with the first part of the classification phase which incorporated the five-step process, as recommended by Dubin's model. The second part of the classification phase examined analytical induction as a process that can be used to verify theories and propositions based on qualitative data, by identifying universal statements and causal laws.

After applying Dubin's five steps to this study, the conceptual model was then assessed in **Chapter 6** through analytical induction, Lawshe's content validity ratio and feedback from the participants. The adapted model was then assessed through a second round of feedback, to establish the applicability and validity of the conceptual model, and the final model was then presented.

7.3. IMPLICATIONS OF THE STUDY

As previously stated, Ramamoorti and Olsen (2007) are of the opinion that many business professionals, especially those in the finance field, tend to discount behavioural explanations for incidence of fraudulent activity. This model addresses certain behavioural aspects associated with management fraud and can be used to demonstrate the behavioural aspect of management fraud. The following section will primarily focus on the implications of the management fraud climate for the behavioural science researcher and for organisations and professionals working to detect management fraud.

7.3.1. For Behavioural Science Researchers

According to Pareek as cited in Srivastav (2009), different types of organisational climates promote different kinds of employee behaviour, and therefore knowledge of organisational climate obtained in different parts of a organisation would assist in better understanding, prediction and management of employee behaviour across the constituent groups within the organisation (Srivastav, 2009). Although the literature was used in this study to make assumptions about the interconnectedness of management fraud and organisational climate and hence contributed to the organisational climate knowledge, this area still needs to be researched further. This principle is further encouraged by Cremer, Tenbrunsel and van Dijke (2010) and Dorminey et al. (2012), who argue that researchers in business ethics need to rely on insights from psychology, as ethical decision making plays a pivotal role in a individuals decision to commit fraud and further motivational issues versus the cognitive issues form an important part of fraudulent research (Albrecht et al., 2009; Andreoli & Lefkowitz, 2009). Although the individual personal traits that are presented in the theoretical model provide insights to an individual's decision to commit management fraud, they should be individually researched further.

Further this study has highlighted the role that the organisation plays in the behaviour of its employees by focussing on the role of the climate of the organisation. Victor and Cullen (1988) and Worrell, Stead, Stead and Spalding (1985), unequivocally agree that organisations are social actors responsible for the ethical or unethical behaviours of their employees and ethics is one of the most important and confounding issues facing organisations today.

In terms of model development, this study incorporated the model development theory of Dubin and analytical induction, by demonstrating how the validation of a theoretically developed model could be corroborated through analytical induction. The study applied the initial steps of Dubin to theory development and addressed some of the criticism towards Dubin's model by adapting phase 2 of Dubin's model to include the usage of analytical induction and Lawshe's content validity as a form of theory validation. According to Oosthuizen (2009) and confirmed by Johnson (2004) there are few examples of analytical induction in organisational research with few instances in this field, and particularly in South Africa. Because of the criticism of analytical induction, this study followed the qualitative comparative analysis (QCA) approach as proposed by Charles Ragin, who formalised the logic of the analytical induction method using a Boolean approach (Bernard, 2013). This study applied analytical induction to organisational research in South African and provides a step-by-step example of how analytical induction can be used as a model-building tool in organisational psychology. Building on the specific work of Oosthuizen (2009) this study provided a comprehensive overview of analytic induction that should assist other behavioural scientists in that it provides a wide-ranging source of reference on analytic induction. This study illustrated how analytic induction is applied. Therefore future researchers now have a step-by-step example of how analytic induction can be applied to Dubin's model development.

7.3.2. For organisations and professionals working to detect management fraud

Bologna and Lindquist (1995) emphasise the point that it is less expensive to prevent fraud than to detect it, and therefore fraud prevention should take precedence over detection. Pro-active management fraud climate assessment can serve as a "barometer" for the fraud investigator and management in terms of assessing the strength of the management fraud climate within an organisation. Continuous and regular measurement of the strength of the management fraud climate model in an organisation can be used to justify the need for a forensic audit, to inform policy makers and to warrant the additional expense incurred by a forensic audit. However, what is clear from the literature is that to be able to detect fraud earlier, would reduce the impact of fraud considerably as previous research indicates that most fraudulent activities commence slowly but expand over time (Kranacher, 2007).

Although this model can be used to detect management fraud it is preferable due to the high cost associated with management fraud, for continuous and regular organisational climate assessment, as this model can proactively assist management in implementing certain processes and policies to address red-flag dimensions or determinants, before these aspects lead to costly management fraud, and can be used to inform and guide policy makers within an organisation. Then again as the perception of climate in an organisation is a result of organisational socialisation and is dependent on organisational policies and procedures (Hicks-Clarke & Iles, 2000; Jones, 1986), leadership can use this model to communicate the need for certain values, policies and procedures with employees in terms of employees own assessment of the direction and strength of management fraud climate within an organisation. Communication of these values, policies and procedures by the leaders on all levels will demonstrate an adoption of the core ethical values of the organisation, which then need to be translated through to employees through the consistent demonstration of these principles in actions that are encouraged, rewarded and socialised (Grosjean et al., 2004). Hence

the performance management system of an organisation can be guided by the management fraud climate model and be used to assess and reward employees for demonstrating appropriate ethical behaviour. The assessment of the management fraud climate can also be used as a benchmark to inform, train and emphasise certain key aspects during the socialisation process of new employees. While the leadership of the organisation at various organisational levels can be assessed in terms of departmental/unit movement towards certain key core ethical values as gauged by key dimensions or determinants within the model. Assessing the strength and direction of management fraud climate can also assist in the type of training and development needs of employees, leadership and different levels of management. Continuous and regular assessment of the management fraud climate within an organisation may encourage open communication between employees and management and may lead to a positive climate that encourages and rewards whistle-blowing. A primary factor in creating a unified climate is ensuring that leaders communicate and apply a consistent set of ethical standards, as the behaviour of leaders are a powerful communication mechanism that conveys the expectations, values and assumptions of the culture and climate to the rest of the organisation (Grosjean et al., 2004).

What is emphasised above is the necessity for regular and continuous assessment and communication of the management fraud climate within an organisation, as this will assist organisations in detecting management fraud sooner, and therefore may reduce the economic loss that organisations may incur as a result of management fraud. Regular and continuous assessment may also impact on the opportunity for managers to commit fraud, as continuous and regular assessment may indicate to all employees the importance that organisations have in preventing and detecting fraud. However, given that multiple subsystems exist and multiple levels of leadership exist, it is recommended by Grosjean et al. (2004) that leadership plays the principle role in creating a unified organisational climate regarding ethical behaviour and that different levels of leadership play different roles in establishing and managing an ethical climate. Each level of leadership uses different strategies, to influence member perceptions and

actions and thereby embedding ethical values and expectations into the organisation's climate (Grosjean et al., 2004). Grosjean et al. (2004) posit that leaders impact the organisational climate regarding ethical conduct of sub-ordinates through seven mechanisms: 1) use values-based leadership; 2) set the example; 3) establish clear expectations of ethical conduct; 4) provide feedback, coaching and support regarding ethical behaviour; 5) recognise and reward behaviours that support organisational values; 6) be aware of individual differences among sub-ordinates and 7) establish leader training and mentoring.

The assessment of the management fraud climate within an organisation will not only primarily benefit organisations, but also the accounting profession. The accounting profession faced approximately US$30 billion in damage claims in the early 1990s, as a result of litigation associated with management fraud (Arthur Andersen as cited in Green & Calderon, 1998). Among the big six accounting firms, the direct costs of defending those lawsuits totalled approximately US$477 million (Green & Calderon, 1998). Management fraud is a leading cause of litigation facing the auditing profession (Palmrose; St Pierre & Anderson as cited in Fanning, Cogger & Srivastava, 1995). As the incidence of management fraud in organisations is a leading cause of litigation against auditing organisations, management fraud climate assessment and integration of this model by auditing organisations in their auditing processes, may reduce the number of lawsuits against auditing organisations;

7.4. SHORTCOMINGS OF THIS STUDY

Several limitations of this study need to be considered:

- This study could have provided broader perspectives if a larger number of research participants from diverse backgrounds, locations and disciplines could have been included;

- There could also have been added value if perspectives from individuals charged or prosecuted with management fraud could have been obtained. It is suggested that such a study would elicit important information that needs to be accounted for;

- The role of specific individual climate determinants and dimensions in management fraud were not explored further;

- The inter-dependency between the various climate determinants and dimensions were not determined;

- The entire theoretical model was not validated during this study;

7.5. RECOMMENDATIONS FOR FUTURE RESEARCH

Based on the shortcomings, the following topics related to this study call for further research:

- The refinement of the proposed conceptual model by means of quantitative research;

- Identification of additional dimensions and determinants which play a role in management fraud;

- Further research on the 3 main classes of variables (external influences, organisational variables and individual influences) that influence organisational climate and how it relates to management fraud should be examined:

- Discovering through statistical analyses, the inter-dependency of the determinants and dimensions which are most likely to lead to management fraud;

- Due to the variety and complexity of fraud, similar studies should be conducted on other types of fraud;

- The impact of similar studies on policy making in South Africa. The focus should be on the extent to which they have influenced policy making and factors that have limited their application in policy making;

- The behavioural aspect on the Fraud Triangle is an important aspect and needs to be explored further;

- Collaborative research of multi-disciplines needs to encouraged, nurtured and explored;

- This study can serve as a base for further research focussing on the underlying behavioural dynamics of fraud detection;

- It is further recommended that the theoretical model as proposed in figure 6.2. be used for further research. Specifically right from the block "direction of climate" (and including it) should be examined further and tested as understanding the components and their arrangements will eventually lead to a better understanding of the phenomenon.

7.6. HAVE THE STUDY AIMS BEEN MET?

The following specific aims were set in Chapter 1:

- **To conceptualise management fraud through an in-depth literature review:**

    - ✓ This aim was achieved in Chapter 2, were management fraud was discussed comprehensively and conceptualised specifically for this study as: "A group of knowledgeable, highly educated perpetrators, who are in a position of power, trust, respectability and responsibility, who through well planned collusive schemes abuse the trust and authority normally associated with the position for personal and/or organisational gains".

- **Conceptualise organisational climate through an in-depth literature review, focussing on ethical climates:**

    - ✓ Chapter 3 focussed on organisational climate and emphasised the role that organisational climate plays in creating an ethical climate in an organisation. For purposes of this study the following definition of organisational climate was proposed: "The relatively enduring and shared perceptions of feelings and attitudes that organisational members have about fundamental elements of the organisation, which reflect the established norms, policies, values, and attitudes of the organisation's culture and influence individuals' behaviour positively or negatively".

- **From the literature review construct a theoretical model that can be used to predict the potential risk of management fraud through the climate of an organisation:**

  ✓ The following theoretical model was constructed by applying Dubin's methodology to the literature on management fraud and organisational climate.

Determinants of Organisational Climate

Leadership style
Implementation of organisational polices
Managerial values
Member characteristics
Organisational values

Dimensions of Organisational Climate

Individual autonomy
Organisational reward
Trust
Perceived individual pressure
Risk taking

Direction of Climate

Pressure

Opportunity

Moderating factors
Gender
Tenure
Education
Age

Rationalisation

Capability

Individual Personal Traits

Ego strength
Individual decision making
Cognitive moral development
Values (Individual & Work)
Locus of control
Machiavellianism
Pecuniary self-interest
Self-control
Self-efficacy

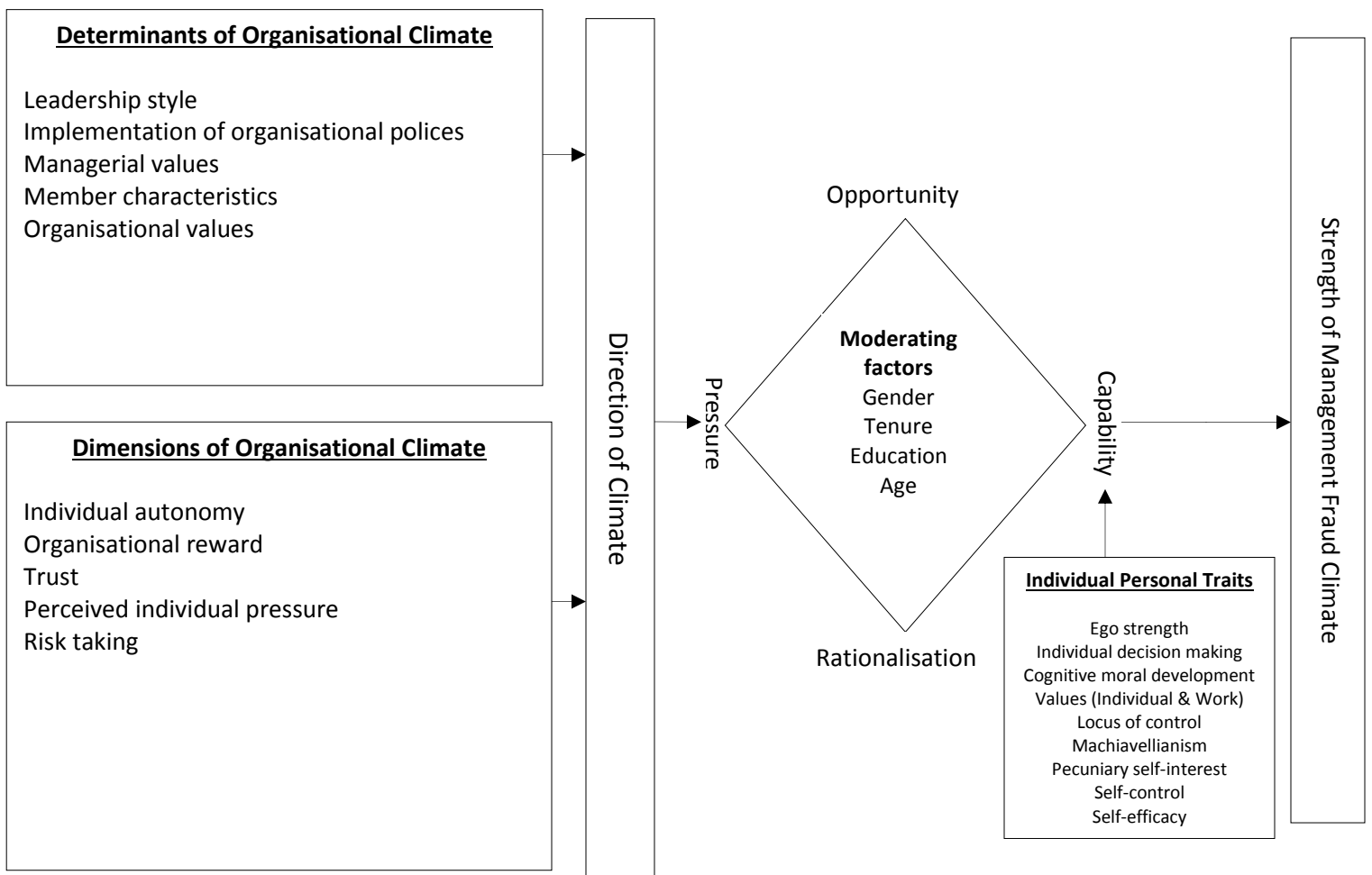Strength of Management Fraud Climate

Figure 7.1. Theoretical model

- **Test the model for face validity;**
  - ✓ Table 1.3. provides an illustration of how the following constructs: perspicuity, parsimony, structural corroboration and referential adequacy were considered in the study.
  - ✓ After applying Dubin's five steps to this study the conceptual model was then assessed through analytical induction and Lawshe's content validity ratio. Feedback from the participants was provided to establish the applicability and validity of the conceptual model
  - ✓ A second round of feedback was also obtained.
  - ✓ The following section of the model was validated:

Determinants of Organisational Climate

Leadership style
Implementation of organisational polices
Managerial values
Member characteristics
Organisational values

Dimensions of Organisational Climate

Individual autonomy
Organisational reward
Trust
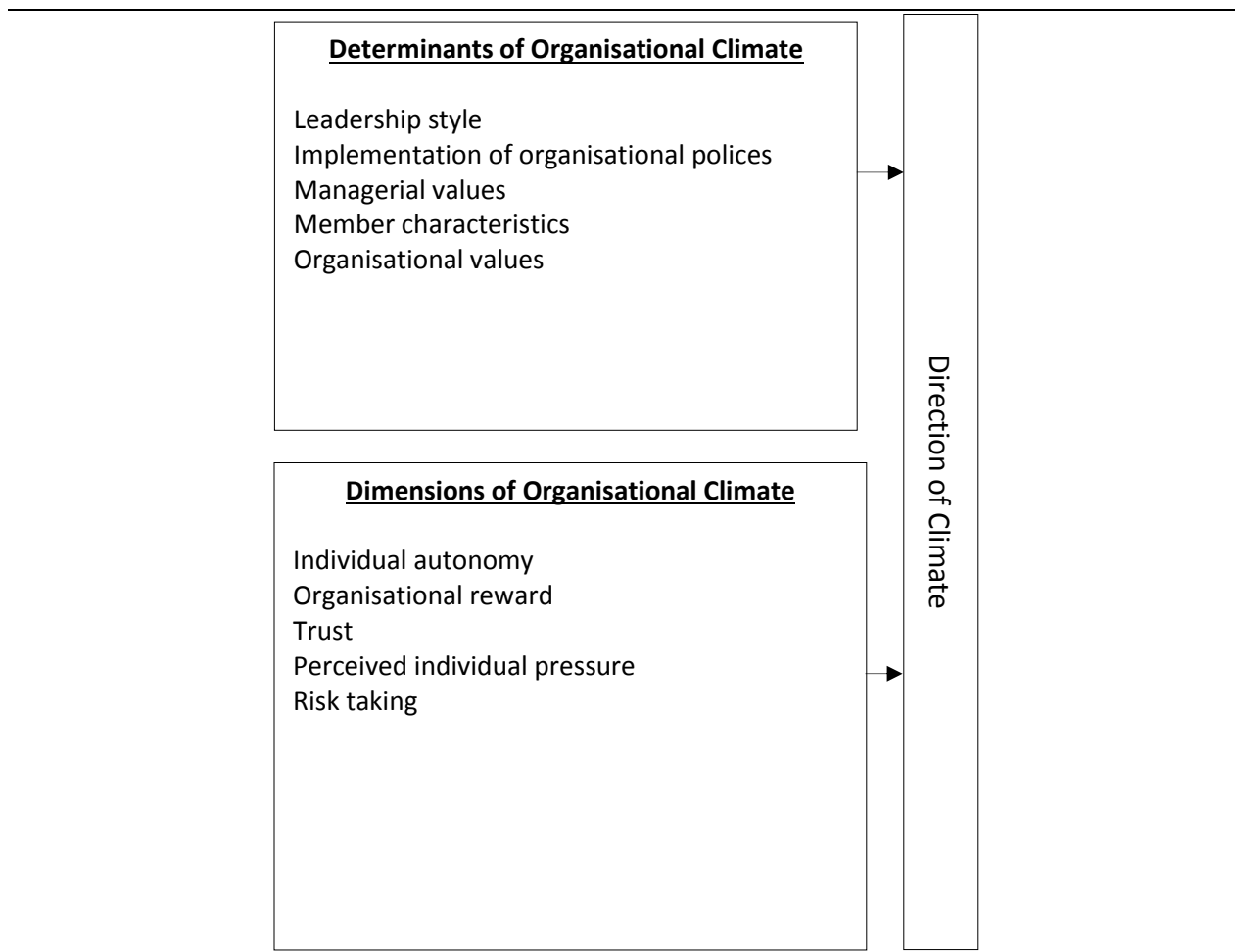Perceived individual pressure
Risk taking

Direction of Climate

Figure 7.2. Validated section of model

- **Formulate conclusions and recommendations from the research which will make a contribution to the prediction of management fraud.**

The researcher believes that he succeeded in achieving all five research aims of the study.

7.7. CONCLUSION

It can be included that the aim of this study was achieved, providing new insights on the role that organisational climate plays in management fraud. Furthermore, the model provides direction for future research and the conclusions and recommendations from this research have contributed to the field of management fraud detection.

7.8. SUMMARY

This chapter provided an overview of the study before focussing on how the proposed conceptual model can be utilised in detecting management fraud. Shortcomings within the current study were addressed, before proposing possible research initiatives that could be followed to address the identified shortcomings.

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Appendix A: Semi-structured interview guide

Step 1: Before commencing with interview

1) Explain that the purpose of this research is about constructing an organisational climate model that can be used as a guide to predict potential risk of management fraud and that climate relates to the recognition of the organisation as a system and the extent to which membership is a psychologically rewarding experience. It can be viewed as a state of mutual trust and understanding among employees of the organisation and is characterised by the nature of the employee-organisation relationship and the superior-subordinate relationship (Mullins, 1989).

2) State that participation is voluntary and that participant may withdraw at any time of the conversation. But also remember to state that conversation is confidential and that person will not be identified in the study.

3) Explain that I will use a semi-structured interview to gather information from the participant, but this is just to guide the process.

4) Further thank the participant for his/her time and state that this interview should take approximately 1 hour.

5) Remember to inform the participant that the interview will be taped, but that this will just be for my records and that no part of this tape will be shared with anyone. Further remember to state that this tape will be immediately downloaded onto my computer and then stored on a CD in a locked cupboard.

6) Ask the participant if he/she is okay with the process and whether we may proceed?

Step 2: General background of participant

If accepted, request that the participant share some information about himself/herself, in terms of professional history and request that they share their experience both on a personal or professional level in terms of fraud. Explore what type of work the participant does.

Step 3: Specific structured questions.

Based on your experience, please answer the following general questions:

- How do you currently detect management fraud?
- Why do you think managers engage in fraud?

Step 4: Background to study

Explain to participant how organizational climate and management fraud is defined in this study.

The majority of research on organisational climate has focussed on a particular aspect of the psychological field measuring, for example; climate for service, climate for safety, climate for innovation and ethical climate. This research project will follow the same rationale and focus specifically on identifying a climate that is conducive for the occurrence of management fraud.

For purposes of this study the following definition of organisational climate is proposed:

"The organisationally constructed perceptions of feelings and attitudes that employees share about fundamental elements of the organisation, which reflect the established norms, values, and attitudes of the organisation's culture and influences an employees decision making positively or negatively".

The majority of management fraud cases involves company management and is the result of pressures to meet either internal or external expectations hence management fraud is distinguished from other types of fraud both by the nature of the perpetrators and by the method of deception (Brewer, 2008). **For purposes of this study the following definition of management fraud is proposed:**

"A group of knowledgeable highly educated perpetrators, who are in a position of power, trust, respectability and responsibility, who through well planned collusive schemes abuse the trust and authority normally associated with the position for personal and/or organisational gains."

Inform the participant that this study suggests the following hypothesis: Organisational climate will have an effect on a manager's inclination to commit fraud.

Step 5: Specific questions

Inform the participant that I am now going to make certain statements and that I would like him/her to respond to and provide his/her reasoning. Inform the participant, that I am interested in his/her opinion and that I may probe certain answers, just to clarify my understanding.

Proposition 1:   Economic conditions will have an effect on the potential risk of management fraud;

Proposition 2:   Leadership style will have an effect on the potential risk of management fraud;

Proposition 3:   Organisational policies will have an effect on the on the potential risk of management fraud;

Proposition 4:   Managerial values will have an effect on the on the potential risk of management fraud;

Proposition 5:   Characteristics of members will have an effect on the on the potential risk of management fraud;

Proposition 6:   Nature of business will have an effect on the on the potential risk of management fraud;

Proposition 7:   Organisational size will have an effect on the on the potential risk of management fraud;

Proposition 8:   Organisational life stage will have an effect on the on the potential risk of management fraud;

Proposition 9:   The individual's freedom autonomy and will have an effect on the on the potential risk of management fraud;

Proposition 10: The emphasis on red tape and bureaucracy will have an effect on the on the potential risk of management fraud;

Proposition 11: The degree to which the organisation rewards an individual for a job well done will have an effect on the on the potential risk of management fraud;

Proposition 12: The freedom to communicate openly with members at higher organisational levels about sensitive or personal issues with that hope that the integrity of such sensitive issues will not be violated will have an effect on the on the potential risk of management fraud;

Proposition 13: Cohesion is the perception of togetherness and sharing within the organisational setting will have an effect on the potential risk of management fraud;

Proposition 14: The amount of pressure an individual experiences will have an effect on the potential risk of management fraud;

Proposition 15: Warmth and support reflect the perception of tolerance of members by management, and this will have an effect on the potential risk of management fraud;

Proposition 16: When employees perceive that change and creativity are encouraged, as well as risk-taking initiated, this perception is regarded as innovation and this will have an effect on the potential risk of management fraud.

Step 6: Feedback on tentative theoretical model

Inform that participant that we have completed the questions on the determinants and dimensions of organisational climate. Thank the participant for his/her inputs. Ask the participant if I may now share with them the tentative theoretical model.
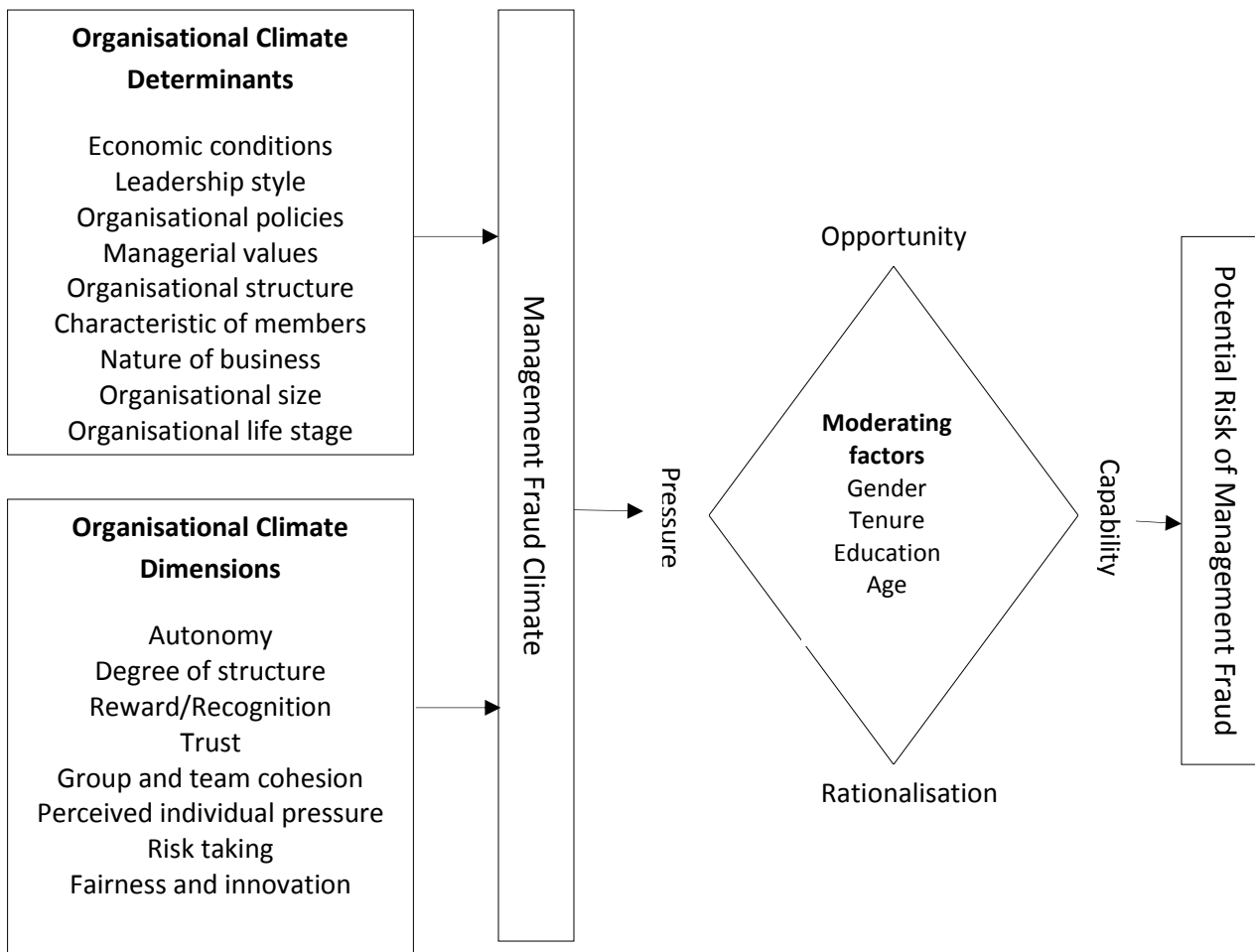
Inform the participant that working from left to right this model assumes that there are certain organisational climate factors (Determinants and Dimensions) within an organisation that can provide an indication of the direction of climate within an organisation. The direction refers to whether employees perceive that a high level of management fraud is appropriate, acceptable or even tolerable in the organisation. This model further assumes that although the acceptance and/or tolerance as perceived by employees may be high, not all managers will engage in fraud, as the various aspects of the fraud diamond also imposes a form of constraint in the organisation.

The level of individual constraint as imposed by the fraud diamond is moderated by an individual's gender, tenure, education and age. These moderation factors are supported by research conducted by ACFE (2009); Murcia and Borba (2007); and Ramamoorti et al., (2009) who state that the majority of white collar crimes are committed by well educated (formal education), middle aged (45-55 years), men and woman (males account for little more than half of all incidents), who have a long tenure (10-15 years). This model further indicates a number of individual personal traits that will have an effect on a manager's rationalisation, pressure and capability to commit fraud.

Hence, the probability of committing management fraud will be higher when both climate factors (to the left of this model) and individual factors (as depicted in the fraud diamond) are present and interacting.

Lead a discussion with participant and request his/her feedback in terms of the theoretical model.

Step 7: Closure

1. Ask if the participant has any further questions or suggestions.
2. Thank the participant for his/her time.
3. Restate that all information gathered will be treated confidentially.
4. Ask participant for possible suggestion on further participants.