Intuition in Decision Making and Learning:
Individual and Organisational Perspectives

by

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Doctor of Philosophy

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Statement of Originality

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Çula Akinci

April 2011
Abstract

Although much has been written about the role of rational/analytical ways of knowing in decision making and problem solving in management, comparatively little is known about the way intuitive cognition manifests itself in organisations in general and in relation to organisational learning in particular. Several conceptualisations have been offered in respect to the ways in which managers perceive, make sense and act in the social settings of business organisations. Intuition and organisational learning came together explicitly in the foundational 4I framework, which presents a theoretical account of how intuitions are articulated and transcend from enterprising individuals to become institutionalised into the wider organisational system.

This thesis contributes to the theoretical development of the subject of intuition in management by integrating three streams of research - intuition, collective decision making, and organisational learning - which have not been well-connected previously. By adopting a dual-process perspective, this research is focused on the role of intuitive judgement in collective decision making and organisational learning. It does so by exploring the ‘intuitive hits’ and ‘intuitive misses’ in the decision making of the senior management teams at three police organisations in the UK.

In order to gain a deeper understanding of the role of intuitive judgement in managerial decision making, a pilot study and two main studies were carried out. In Study 1, the Rational Experiential Inventory, a self-report inventory for measuring rational and experiential thinking styles, has been employed with the aim to explore individual differences in the use of intuitive and analytical cognitions in police work, using a sample of police staff and police officers. In Study 2, a multi-case study approach was adopted. The 4I organisational learning framework was combined with the method of Critical Incident Technique to gather retrospective accounts from senior police officers of instances where intuitive judgement led to both effective and ineffective organisational outcomes. Data was collected based on in-depth semi-structured focus group interviews with senior police management teams.

The research results are significant in that they provide new understandings and insights with a particular emphasis on the ways in which the tacit knowledge that forms the basis for intuitions may be institutionalised within organisations, ultimately leading to organisational learning. The findings reveal that intuition acts as a catalyst for the organisational learning process: it affects both individual and collective actions; it therefore has the potential to influence and inform not only individual learning but also collective interpretation and the development of shared meaning and sense-making within an organisation.

To conclude, it is acknowledged that the generalisation of findings is context-specific to the police authority, and therefore it may be restricted in its application to other domains. The implications of the findings for managers in general are discussed in detail, and a number of areas for future research are identified to extend the boundaries of our understanding of the role of intuition in individual and collective cognitions.
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<td>4I</td>
<td>Intuiting, Interpreting, Integrating, Institutionalising</td>
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<td>ABC</td>
<td>Adaptive Behaviour and Cognition</td>
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<td>ANOVA</td>
<td>Analysis of Variance</td>
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<td>BCU</td>
<td>Basic Command Unit</td>
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<td>BDT</td>
<td>Behavioural Decision Theory</td>
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<tr>
<td>CAQDAS</td>
<td>Computer Aided Qualitative Data Analysis Software</td>
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<td>CEO</td>
<td>Chief Executive Officer</td>
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<td>CEST</td>
<td>Cognitive-Experiential Self-Theory</td>
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<td>CFA</td>
<td>Confirmatory Factor Analysis</td>
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<td>CIT</td>
<td>Critical Incident Technique</td>
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<td>CSI</td>
<td>Cognitive Style Index</td>
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<td>CTA</td>
<td>Cognitive Task Analysis</td>
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<td>EA</td>
<td>Experiential Ability</td>
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<td>EE</td>
<td>Experiential Engagement</td>
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<tr>
<td>EFA</td>
<td>Exploratory Factor Analysis</td>
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<tr>
<td>EN</td>
<td>Experientiality Negatively-worded</td>
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<td>EP</td>
<td>Experientiality Positively-worded</td>
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<td>GFI</td>
<td>Goodness of Fit Index</td>
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<td>IFI</td>
<td>Incremental Fit Index</td>
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<td>LTM</td>
<td>Long-Term Memory</td>
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<td>LTWM</td>
<td>Long-Term Working Memory</td>
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<td>NDM</td>
<td>Naturalistic Decision Making</td>
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<td>PCA</td>
<td>Principal Components Analysis</td>
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<td>POA</td>
<td>Police Organisation A</td>
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<td>POB</td>
<td>Police Organisation B</td>
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<td>POC</td>
<td>Police Organisation C</td>
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<td>Q&amp;I</td>
<td>Quick and Inflexible</td>
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<td>RA</td>
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<td>Rational Experiential Inventory</td>
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<td>RMSEA</td>
<td>Root Mean Square Error of Approximation</td>
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<td>RPD</td>
<td>Recognition Primed Decision</td>
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<td>Research Question</td>
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<td>SECI</td>
<td>Socialisation, Externalisation, Combination, Internalisation</td>
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<td>SME</td>
<td>Small and Medium Enterprise</td>
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<td>SMH</td>
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<td>Senior Management Team</td>
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<td>SPSS</td>
<td>Statistical Package for the Social Sciences</td>
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<td>STM</td>
<td>Short-Term Memory</td>
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<td>TMT</td>
<td>Top Management Team</td>
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Chapter 1  Introduction

1.0 Background of the Research

Organisational learning has been researched extensively over several decades, and multiple conceptualisations and theoretical formulations have been presented (e.g. Argyris and Schön, 1978; Fiol and Lyles, 1985; Huber, 1991; Levitt and March, 1988; Senge, 1990). Organisational learning theory distinguishes between the knowledge held subjectively by individuals (which can be tacit) and that held inter-subjectively by groups, teams and organisations (which may be presumed to be explicit) (see Spender, 1996). Sequential to the developments in the field of organisational learning, researchers with an interest in individual learning and cognition have begun to conceptualise and theorise several contrasting ways in which managers perceive, make sense and act in the social settings of business organisations, which often do not conform to the ideal of rationality and which are cognisant of its limitations.

Based on a critique of rationality and an acknowledgement of its limits (e.g. Simon, 1987), researchers have turned their attention to more tacit and implicit ways of knowing and learning (e.g. Tsoukas, 2003). In this respect, intuition has received increased attention in management research due to its significance for, and potential impact on, strategic decision making (Barnard, 1938; Simon, 1978a, 1987, 1997; Behling and Eckel, 1991; Burke and Miller, 1999; Sadler-Smith and Shefy, 2004; Miller and Ireland, 2005; Sinclair and Ashkanasy, 2005; Dane and Pratt, 2007; Hodgkinson, Langan-Fox and Sadler-Smith, 2008). A growing number of researchers have argued that intuitive judgement plays an important role in decision making and is the key to effective organisational outcomes under particular sets of circumstances (Agor, 1984, 1986; Allinson, Chell and Hayes, 2000; Khatri and Ng, 2000; Sadler-Smith, 2004; Sadler-Smith and Sparrow, 2008; Shapiro and Spence, 1997; Hayashi, 2001; Isenberg, 1984; Parikh, Neubauer and Lank, 1994).
A number of these researchers have focused in recent years on the distinction between intuitive and analytical modes of information processing (Dane and Pratt, 2007; Hodgkinson et al, 2008; Sadler-Smith and Shefy, 2004; Sinclair and Ashkanasy, 2005). Work in this area is based on a long tradition and has potentially strong connections to theories of organisational learning and knowledge (e.g. Polanyi, 1966). Only in recent years has it been possible to conceptualise intuitive forms of knowing within a coherent body of psychological theory grounded in dual-process conceptualisation of cognition (Hodgkinson et al, 2008).

Intuitions are “affectively charged judgements that arise through rapid, nonconscious, and holistic associations” (Dane and Pratt, 2007: 40), and this echoes Polanyi’s assertion that “we can know more than we can tell” (1966: 4). Management researchers have offered explanations for the underlying cognitive and affective mechanisms of intuitive judgement (Hodgkinson et al, 2008), suggesting different types of intuition (Dane and Pratt, 2009), and exploring its role in organisational performance (e.g. Khatri and Ng, 2000; Sadler-Smith, 2004). Despite the recent resurgence of interest in the topic, intuition research has yet to fully engage with the notion of collective intuition, correspondingly organisational learning research has much to gain from recent developments in intuition research, and vice versa.

Intuition and organisational learning came together explicitly in the foundational 4I model of Crossan, Lane and White (1999), which presents a theoretical account of how intuitions are articulated and transcend from enterprising individuals to become institutionalised into the wider organisational system. Along with dual-process theory, 4I is the underlying framework in this research given its explicit acknowledgement of the role of intuition in collective learning. It is acknowledged in the literature that there has been only a small number of empirical studies on the 4I model and related processes in organisational contexts.

The current research explores this topic in the context of managerial decision making in three police organisations. There is, to the best of the researcher’s knowledge, no extensive body of theory or empirical work relating to intuitive decision making in
police senior management teams. Whilst there has been a great deal of theoretical development with respect to the top management teams (TMT), most of this literature is concerned in analysing the impact of TMT composition on decision outcomes and firm performance (Hambrick and Mason, 1984; Bantel and Jackson, 1989; Finkelstein and Hambrick, 1990; Michel and Hambrick, 1992; Jackson, 1992; Keck and Tushman, 1993; Hambrick, Cho and Chen, 1996; Papadakis and Barwise, 2002; Carpenter, 2002; Kauer, Prinzessin zu Waldeck and Schaffer, 2007). However, in this research the focus of interest is not that of establishing a relationship between TMT’s characteristics and firm performance; rather the interest is in developing a comprehensive understanding of the role of intuition in decision making and organisational learning from an individual as well as an organisational perspective. Therefore, the lack of literature on intuition and organisational learning in police organisations represents an opportunity for the investigation of these phenomena within the context of police senior management teams.

1.1 Research Objectives

This thesis seeks to integrate three streams of research – intuition, collective decision making, and organisational learning – that have not been well-connected previously, and thereby contributes to the theoretical development of the subject of intuition in managerial decision making and organisational learning.

The primary objective of this thesis is to undertake empirical research to explore the role of intuitive judgement in cognition and decision making as it pertains to police work in general, and organisational learning in the context of police organisations in particular from the individual and organisational perspectives. The research will attempt to answer the following research questions (RQ).

RQ1 Are there individual differences in the use of intuitive (experiential) and analytical (rational) thinking (cognitive) styles amongst members of police organisations;

RQ2 Do senior managers use intuitive judgement in decision making, and under what circumstances do they use it;
RQ3 How effective are intuitive judgements perceived to be (for example, when does intuition ‘hit’ and when does it ‘miss’?);

RQ4 Do ‘good’ and ‘bad’ intuitions become embedded within the organisation’s systems and structures, if so how, and what are the consequences;

RQ5 How does intuiting lead to organisational learning, and how can intuitions be capitalised upon as a source of organisational learning?

These questions form the basis of the two main studies in this thesis.

1.2 Structure of the Thesis

Following the current introduction chapter, the structure of this thesis is organised as follows: Chapter 2 critically reviews the literature on intuition research in management from its conception in the 1930s until today. This chapter traces chronologically the origins of intuition as studied by researchers in management and related fields. Chapter 3 presents the literature on decision making in management teams. This chapter outlines the development of the decision making research in top management teams particularly focusing on team characteristics, dynamics of decision making processes, and collective cognitions of teams. Chapter 4 presents the literature on organisational learning with specific focus on the 4I model as the underlying framework of this research. Chapter 5 outlines the methodological framework of this research and provides the rationale underlying the research philosophy adopted and the methodological approach employed in seeking to answer the research questions. Chapter 6 reports on Study 1 of this research which evaluates the intuitive and analytical thinking styles of police officers and police staff from an individual perspective. Chapter 7 documents the findings of the pilot study on senior managers’ experiences of intuition in decision making. Chapter 8 and 9 report on Study 2 of this research, and critically analyse the ‘intuitive hits’ and ‘intuitive misses’ of three police organisations respectively in six case studies of decision making and organisational learning processes. Chapter 10 discusses and synthesises the findings of Study 2 in light of previous research, and develops a conceptual framework based on the findings of the current research. Finally, Chapter 11
concludes the thesis. This chapter highlights the theoretical contributions and managerial implications of this research, discusses limitations of the studies undertaken, and provides directions for future research.
Chapter 2 Overview of Intuition Research in Management

2.0 Introduction

Intuition has received attention in management research due to its significance for and potential impact on strategic decision making (Barnard, 1938; Simon, 1978b, 1987, 1997; Behling and Eckel, 1991; Burke and Miller, 1999; Andersen, 2000; Patton, 2003; Sadler-Smith and Shefy, 2004; Miller and Ireland, 2005; Sinclair and Ashkanasy, 2005; Dane and Pratt, 2007; Hodgkinson et al, 2008). A growing number of authors have argued that intuitive judgement plays an important role in decision making and is the key to effective organisational outcomes under particular sets of circumstances (Agor, 1984, 1986; Allinson et al, 2000; Khatri and Ng, 2000; Sadler-Smith, 2004; Shapiro and Spence, 1997; Sinclair and Ashkanasy, 2005; Dane and Pratt, 2007; Sadler-Smith and Sparrow, 2008).

In this chapter, a historical perspective of intuition research in decision making will be adopted and the models of intuition and decision making developed by the most important thinkers in this field will be explored. In particular, the following traditions of research will be reviewed: logical versus non-logical processes; bounded rationality; heuristics and biases; fast and frugal heuristics; recognition primed decision making; affect heuristic; and Cognitive-Experiential Self Theory. The chapter will conclude with an overview of the most recent developments in intuition research.

2.1 Chester I. Barnard: Logical versus Non-Logical

Chester Barnard (1886 to 1961) was a telecommunications executive, whose importance for management research lies in creating a new theory around organisational structure, focusing on the organisation as a communication system. After working as an engineer with the American Telephone and Telegraph Company (AT&T) in Boston, eventually he moved on to become the president of the New
Jersey Bell Telephone Company where he remained as the Chief Executive Officer (CEO) until his retirement (Anonymous, 2003). Although he was a practitioner rather than a scholar, he is one of the founding fathers of decision making analysis in management theory (Novicevic, Hench and Wren, 2002).

Barnard recorded his insights about management in his best-known books *The Functions of the Executive* (1938) and *Organization and Management* (1948). Barnard looked at organisations as systems of cooperation of human activity and focused on the importance of communication (Gehani, 2002). In his conceptualisation of logical rational and non-logical intuitive processes, Barnard was one of the first management writers to articulate what intuition is, to speculate upon its nature and origins, and upon the circumstances and particular job roles in which it is relevant.

Intuition was addressed by Barnard in the Cyrus Fogg Brackett Lecture to the Engineering Faculty and Students of Princeton University on the 10th of March 1936. In his lecture entitled ‘The Mind in Everyday Affairs’ (the Appendix of his most famous book *The Functions of the Executive*, 1938) Barnard talked about important aspects of human beings’ mental functioning in the work of, what he termed, ‘everyday affairs’. He stated that the difference in mental processes, often reflected and expressed by such phrases as difference in “mental attitude”, “point of view”, “way the mind works” (Barnard, 1938: 302) and the wide divergence of opinion, often not realised, as to what constitutes a proper intellectual basis for opinion or deliberate action, that is, what is good evidence, proof, or justification. In addition, the difference in mental processes, quite independent of knowledge or experience, is at the root of these very important practical difficulties in many cases. Barnard’s thesis was that these mental processes consist of two groups which he called “non-logical” and “logical”, which are not clearly separated but meld into each other (Barnard, 1938: 302).

“By ‘logical processes’ I mean conscious thinking which could be expressed in words, or other symbols, that is, reasoning. By ‘non-logical processes’ I mean those not capable of being expressed in words or as reasoning, which are only made known by a judgement, decision or action.” (Barnard, 1938: 302)
In Barnard’s point of view, the most significant difference in individuals and in the various types of work that they do lies in the degree to which actual thinking, that is reasoning, is used or is required. His argument was that executives, as contrasted with scientists, do not often make their decisions on the basis of orderly rational analysis, but depend largely on intuitive or judgemental responses to decision demanding situations (Simon, 1987).

Although Barnard did not provide a set of formal criteria for distinguishing between logical and judgemental decision making, he did provide a characterisation of the two styles that makes them easily recognisable, at least in their more extreme forms. In ‘logical’ decision making, goals and alternatives are made explicit, the consequences of pursuing different alternatives are calculated, and these consequences are evaluated in terms of how close they are to the goals. In ‘judgemental’ decision making, the response to the need for a decision is usually too rapid to permit an orderly sequential analysis of the situation, and the decision maker cannot usually give a valid account of either the process by which the decision was reached or the grounds for judging it correct (Simon, 1987).

“Some of it is so unexplainable that we call it ‘intuition’. A great deal of it passes under the name of ‘good judgement’. Some of it is called ‘inspiration’ and occasionally it is the ‘stroke of genius’. But most of it is called ‘sense’, ‘good sense’, or ‘common sense’, ‘judgement’, or the ‘bright idea’.” (Barnard, 1938: 305)

Barnard did not regard the non-logical processes of decision as magical in any sense. On the contrary, he felt they were mostly grounded in knowledge and experience. According to him, the sources of these non-logical processes lie in physiological conditions or factors, or in the physical and social environment, mostly impressed upon us unconsciously or without conscious effort on our part. Because they are so complex and so rapid, often approaching the instantaneous, they could not be analysed by the person within whose brain they take place (Barnard, 1938). They consist of the mass of facts, patterns, concepts, techniques, abstractions, and generally what we call formal knowledge or beliefs, which are impressed upon our minds more or less by conscious effort and study. This second source of non-logical
mental processes greatly increases with directed experience, study and education (Barnard, 1938).

As the need for expressing logical reason is one of the most important human necessities, there is a general belief that reasoning indicates a higher order of intellect than do the non-logical processes underlying quick judgements (Barnard, 1938). From a psychological perspective, reasoning is the means by which people make use of their vast stores of knowledge and apply them to particular situations (Evans, Newstead and Byrne, 1993). Evans and Wason (1976) proposed that the Type 2 process (i.e. logical process) operates at a conscious level, and hence may be reported by the subject as the reason for their performance. These Type 2 processes may have some part in organising behaviour, but their most common function is to 'rationalise' the outcome of Type 1 processes (i.e. non-logical processes) of which the subject is unaware (Evans and Wason, 1976).

According to Barnard, there appear to be two chief causes for overstressing of logical processes in contrast to the non-logical processes: misconception concerning the nature of logical reasoning, and a deep desire or need to argue and to justify by rationalisation. Barnard asserted that if this bias against the non-logical processes is put aside, then it is easy to see the insufficiency of logical processes when used alone and the desirability of their development in coordination with the non-logical, intuitive processes (Barnard, 1938).

2.2 Herbert A. Simon: Bounded Rationality

Herbert Simon (1916 to 2001) was a Professor in psychology and computer science at Carnegie Mellon University up until he passed away in 2001. Although he was educated as an economist, his research ranged from political science to administration, psychology, and information sciences. His interest in human decision making and problem solving processes led to extensive use of the computer as a tool for simulating human thinking. In addition to the A.M. Turing Award, the National Medal of Science and many other awards for his work in cognitive psychology and computer science, Simon had been awarded the Alfred Nobel Memorial Prize in
Economie Sciences in 1978 for his pioneering research into the decision making process in economic organisations.

In one of his best known, ‘epoch-making’ (Nobelprize.org, 1978) book Administrative Behaviour (1947), Simon described the organisation as an adaptive system of physical, personal and social components, which are held together by a network of intercommunications and by the willingness of its members to cooperate and to work towards common goals. He replaced the entrepreneur of the classical school with a number of cooperating decision makers whose capacities for rational action are limited by a lack of knowledge of the total consequences of their decisions, as well as by personal and social ties. In an attempt to contrast the psychological and the logical elements in the choice process, and the examination of the limits and the possibilities of human rationality, Simon developed the notion of “bounded rationality” (Simon, 1997: 118) and the role of intuition in management decision making.

2.2.1 Bounded Rationality

Neo-classical economic assumptions lie at the heart of rational choice models of decision making (Miller, Hickson and Wilson, 1999). According to the classical theory of economic decision making, individuals normally act as maximising entrepreneurs who arrive at decisions by a step-by-step process which is both logical and linear. Consequently, the decision makers identify a problem or issue about which a decision has to be made, collect and sort information about alternative potential solutions, compare each solution against predetermined criteria to assess degree of it, arrange solutions in order of preference, and make an optimising choice (Cyert, Simon and Trow, 1956; Miller et al, 1999).

The classical economic model assumes knowledge of all the alternatives that are open to choice; complete knowledge of, or ability to compute, the consequences that will follow on each of the alternatives; certainty in the decision maker’s present and future evaluation of these consequences; and the ability to compare consequences, no matter how diverse and heterogeneous, in terms of some consistent measure of utility.
In this respect, the classical theories of decision making and the business firm make very specific testable predictions about the concrete behaviour of decision making agents.

Simon was one of the earliest authors to provide a comprehensive critique of the limitations of the rational economic model (Simon, 1955, 1978b, 1983, 1987, 1997). He argued that this kind of theory is strikingly simple: all the predictive power comes from characterising the shape of the environment in which the behaviour takes place. In this respect, the environment, combined with the assumptions of perfect rationality, fully determines the behaviour. In contrast, Simon (1979) argued that the pattern of human choice is often more nearly a stimulus-response pattern rather than a choice among alternatives. According to this notion, human rationality operates within the limits of a psychological environment which imposes on the individual as “givens” (Simon, 1997: 117), a selection of factors upon which they must base their decision.

Simon asserted that, constrained by the complexity of modern organisations, by the uncertainty of the environment, and by their own limited cognitive capacities, decision makers are unable to operate under conditions of perfect rationality. Simon’s argument was that managers have to operate within a ‘bounded rationality’ (Simon, 1955, 1978b, 1983, 1987, 1997). This model of rational choice emphasises that it is impossible for the individual to know all his alternatives or all the consequences, and this impossibility is a very important departure of actual behaviour from the model of objective rationality. The important point is that the decision makers intend to be rational and their behaviour is reasoned – it is not irrational. However, there is a limited degree of rationality which can be employed.

In the middle of the 1950s, a strong positive case began to emerge for replacing the model of classical rational “economic man” by the “administrative man” of bounded rationality (Simon, 1955: 99; Simon, 1997: 119; Miller et al, 1999: 43). This model would describe how decisions could be (and probably actually were) made when the alternatives had to be sought out; the consequences of choosing particular alternatives were only very imperfectly known both because of limited
computational power and because of uncertainty in the external world; and the
decision maker did not possess a general and consistent utility function for
comparing heterogeneous alternatives.

In comparison, while the economic man supposedly maximises (i.e. selects the best
alternative from among all those available to him), his 'brother' the administrative
man satisfices (i.e. looks for a course of action that is satisfactory or good enough).
Economic man purports to deal with the 'real world' in all its complexity, on the
other hand the administrator recognises that the perceived world is a “drastically
simplified model of the buzzing, blooming confusion that constitutes the real world”
(Simon, 1997: 119). The administrator treats situations as only loosely connected
with each other and takes into account just a few of the factors of the situation
regarded as most relevant and crucial (Simon, 1997).

Two concepts that are central to this characterisation are information search and
satisficing. The word 'satisfice' has been described by Oxford English Dictionary
(2nd edition, 1989) as “to decide on and pursue a course of action that will satisfy the
minimum requirements necessary to achieve a particular goal.” Simon's concept of
satisficing, a word that originated in Northumbria, is a method for making a choice
from a set of alternatives encountered sequentially when one does not know much
about the possibilities ahead of time (Simon, 1956). If the alternatives for choice are
not given initially to the decision maker, then he must search for them.

Simon asserted that, instead of searching for the best alternative, the decision maker
is usually concerned with finding a satisfactory alternative, one that will attain a
specified goal and at the same time satisfy a number of auxiliary conditions. It could
be assumed that the decision maker had formed some aspiration as to how good an
alternative he should find. As soon as he discovers an alternative for choice meeting
his level of aspiration, he would terminate the search and choose that alternative. In
this respect, satisficing takes the shortcut of setting an adjustable aspiration level and
ending the search for alternatives as soon as a satisfactory solution has been
discovered that exceeds the aspiration level, even though the field of possibilities has
not been exhausted (Cyert et al, 1956; Simon, 1979).
Having analysed the two different schools of thought, the classical theory of decision making and the model of bounded rationality, Simon (1978b) asserted that the classical model does not work when we are seeking to explain the decision maker’s behaviour in complex, dynamic circumstances that involve a great deal of uncertainty. This is because the classical theory of rational choice has generally ignored the information processing limitations and assumed that rationality was concerned with choice among alternatives that were already specified, and whose consequences were known or were readily calculable (Simon, 1965). On the other hand, there is a tremendous weight of evidence that the bounded rationality theory describes the way people do in fact make decisions and solve problems in the real world (Simon, 1983). Therefore, in Simon’s view, the assumptions of the behavioural model are almost certainly closer to reality than those of the classical theory.

2.2.2 Simon’s Conceptualisation of Intuition

Simon (1992) stated that in everyday speech we use the word ‘intuition’ to describe a problem-solving or question-answering performance that is speedy and for which the expert is unable to describe in detail the reasoning or other process that produced the answer. Simon explained this as a process of inputting certain premises and outputting certain conclusions or decisions such that the situation provides a cue, this cue gives the expert access to information stored in memory, and the information provides the answer. In this respect, Simon suggested that “intuition is nothing more and nothing less than recognition” (Simon, 1992: 155). In other words, intuition enables the expert’s rapid recognition of and response to situations that are marked by familiar cues, and thereby gives access to large bodies of knowledge assembled through training and experience (Simon, 1997, 1983).

Simon regarded the expert behaviour as a production system where cues in the environment that the expert encounters trigger information in memory, hence initiating actions appropriate to the situations marked by these cues. Information organised in a production system of this kind can produce expert behaviour (Simon, 1992). This interpretation and linking form the foundation for two related types of
reasoning used by experts: analysis and intuition. Analysis involves sustained, systematic thought over a substantial span of time, while intuition reflects timely and seemingly less deliberate reasoning that is sometimes referred to as a “hunch” or “professional judgement” (Prietula and Simon, 1989: 122).

Analytical reasoning corresponds to Barnard’s ‘logical’ processes. This is typically associated with complex problem solving and consists of gathering information, mobilising relevant knowledge, making observations about the situation, and proposing solutions. Analytical reasoning takes time and requires extensive use of mental capital. On the other hand, intuitive reasoning corresponds to Barnard’s ‘non-logical’ or ‘judgemental’ processes. This type of reasoning occurs when experts generate accurate observations or even solutions without thinking more than a few seconds and without appearing to examine the situation closely.

At the time when the book *Administrative Behaviour* was written in 1947, Herbert Simon was troubled by Barnard’s account of intuitive judgement largely because he left no clues as to what subconscious processes go on while judgements are being made. Wholly persuaded, however, that a theory of decision making had to give an account of both conscious and subconscious processes, Simon finessed the issue by assuming that these processes draw on factual premises and value premises, and operate on them to form conclusions that become the decisions.

*‘Split-Brain’ Research*

During the 1980s and 1990s physiological research on the human brain, and specifically the concept of hemispheric differences in brain functioning (the so-called ‘split-brain’ research) has provided encouragement to the idea of qualitatively different kinds of decision making processes -- what could be described in the context of this chapter as the analytical and the intuitive. The ‘two brains’ hypothesis argued that rational and intuitive processes are so different that they are carried out in different parts of the brain (Simon, 1987). The primary evidence for this dichotomy is that (in right-handed people) the right hemisphere plays a special role in the
recognition of visual patterns, and the left hemisphere in analytical processes and the use of language.

In one of the most famous and widely-cited papers on the subject, “Planning on the Left Side and Managing on the Right”, which appeared in *Harvard Business Review*, Mintzberg (1976) suggested a similar hemispheric specialisation which set the framework for the understanding of the brain at the time. He explained that the logical thinking processes are found in the left hemisphere of the brain. It seems that the mode of operation of the brain’s left hemisphere is linear: it processes information sequentially, one bit after another, in an ordered way. On the contrary, the right hemisphere is specialised for simultaneous processing, that is, it operates in a more holistic, relational way.

Speech, being linear, is a left-hemispheric activity, but other forms of human communication, such as gesturing, are relational rather than sequential and tend to be associated with the right hemisphere. According to this theory, most lawyers, accountants, and planners are likely to have better developed left-hemispheric thinking processes, while artists, sculptors, and perhaps politicians may be expected to have better developed right-hemispheric processes. Mintzberg (1976) further explained that the techniques of planning and management science are sequential, systematic and articulated. Therefore, planners and management scientists are expected to proceed in their work through a series of logical, ordered steps, each one involving explicit analysis. However, the key managerial processes are enormously complex and “mysterious” (Mintzberg, 1976: 53), drawing on the vaguest of information and using the least articulated of mental processes. These processes seem to be more relational and holistic than ordered and sequential, and more intuitive than intellectual; they seem to be most characteristic of right-hemispheric activity.

Mintzberg (1976) concluded that the great powers that appear to be associated with the right hemisphere are obviously useless without the faculties of the left. Therefore, truly outstanding managers are no doubt the ones who can couple effective right-
hemispheric processes (e.g. hunch, judgement, synthesis) with effective processes of the left (e.g. articulateness, logic, analysis).

Although these findings had great implications for the wider understanding of the left-brain/right-brain dichotomy in the field of management science at the time, the research in psychology, physiology and cognitive neuroscience has moved on, and when we look at the cognitive neuroscientific-neurological aspects of decision making, a more complex picture emerges. In a provocative and cautionary short piece entitled “The Brain as Boondoggle”, Michael Gazzaniga, one of the pioneers of split-brain research and student of Nobel Prize winner Roger Sperry, stated that neuroscientists now know more and more about the automatic ways in which the brain works. For example, when experiencing a strong emotional response, one part of the brain tends to light up more than others (Gazzaniga, 2006). He suggested that this finding is potentially useful in business, for example in order to offer practitioners a clearer picture of the physiology of customers’ desires, however it has created a false expectation about what neuroscience can do. He drew attention to the fact that despite the advancements in this field, managers should not expect to be able to choose the right people for their organisation by simply looking at their brain scan. Gazzaniga (2006) argued that this kind of quest for certainty could devalue the intuition that managers traditionally rely on.

The real evidence for two different forms of thought comes from what Barnard relied on: the observation that in everyday affairs men and women often make competent judgements or reach reasonable decisions rapidly, without any overt indication that they have engaged in systematic reasoning, and without their being able to report the thought processes that took them to their conclusions. There is also some evidence for the very plausible hypothesis that some people, when confronted with a particular problem, make major use of intuitive processes in solving it, while other people make relatively more use of analytical processes.

Barnard’s evidence shows that although the process is quite different from each other, there is no incompatibility between analytical and intuitive reasoning. Simon further reinforced this argument by stating that intuition grows out of experiences
that once called for analytical steps (Prietula and Simon, 1989). He proposed that “intuition and judgement – at least good judgement – are simply analysis frozen into habit and into the capacity for rapid response through recognition” (Simon, 1987: 63). As experience builds, the expert begins to ‘chunk’ the information into patterns and bypasses the steps for analysis. If the same pattern of information is encountered again, the expert will know what data are relevant and what are not, and therefore possible answers generated from previous experience will pop up intuitively. Over time as more patterns are chunked and linked, the hunches become better.

**Evidence from Chess Masters**

Simon (1998) illustrated this with the game of chess. Chess is usually believed to require a high level of intellect as well as a high level of analytical approach, with players working out systematically the consequences of moves and countermoves such that a single move can take a substantial amount of time. However, in simultaneous games the chess expert takes much less time for each move as there is no time for careful analysis. Evidence supports that in this rapid play, a large part of the chess master’s expertise lies in his intuitive or recognition capabilities based on large amounts of stored and indexed knowledge derived from training and experience (Simon, 1992).

Chase and Simon (1973a, 1973b) carried out a number of experiments to discover and characterise the chunk size and memory span of chess players from master to novice. In these studies, they briefly presented chess positions to the subjects with randomly rearranged chess pieces (i.e. chunks). At that time, Chase and Simon believed that storage of new information in long-term memory (LTM) was quite time consuming, and that memory for briefly presented information could be maintained only in short-term memory (STM) for experts and non-experts alike. Therefore, their hypothesis was that recall is limited by the number of chunks that can be stored in STM.

This proposition was reconciled with the known limits of STM by observing that for the chess master a position from a game does not consist of 25 isolated pieces but of
five or six chunks of familiar patterns. The finding showed that the superior memory for briefly presented chess positions is not due to any general memory ability, such as photographic memory, but depends critically on subjects' ability to perceive meaningful patterns and relations between chess pieces (i.e. chess skill).

Empirical evidence suggests that the master or grandmaster holds in his memory about 50,000 different patterns of pieces that he will recognise instantly when they are present in a chess position. Associated with each pattern in his memory is information about the significance of that pattern, for instance what dangers it holds, and what offensive or defensive moves it suggests. Recognising the pattern brings to the grandmaster's mind, at once, moves that may be appropriate to the situation. It is this recognition that enables the professional to play very strong chess at a rapid rate. Therefore, the speed with which players can perceive information on the chessboard depends upon their chess skill, and chess skill depends in large part upon a vast, organised LTM of specific information about chessboard patterns. Previous learning that has stored the patterns and the information associated with them in memory makes this performance possible (Simon, 1978a, 1987, 1998). Simon and Chase (1973) argued that a 10-year period of intense preparation is necessary to reach the level of an international chess master.

2.3 Daniel Kahneman and Amos Tversky: Heuristics and Biases

Daniel Kahneman earned his PhD in psychology from the University of California, Berkeley in 1961. He began his academic career as a lecturer in psychology at Hebrew University, where he then became an Associate Professor in 1970 (Nobelprize.org, 2002). Currently, Kahneman is a senior scholar and faculty member Emeritus at Princeton University's Woodrow Wilson School, also a fellow at Hebrew University, Jerusalem. A long time collaborator of Kahneman, Amos Tversky (1937 to 1996) was a cognitive and mathematical psychologist, a pioneer of cognitive science, and a key figure in the discovery of systematic human cognitive bias and handling of risk (Nobelprize.org, 2002). His early work with Kahneman focused on the psychology of prediction and probability judgement.
In 1979, Tversky and Kahneman originated ‘prospect theory’, as an alternative to expected utility theory, to describe decisions between alternatives that involve uncertain outcomes with risk (Kahneman and Tversky, 1979). The theory is developed for simple prospects with monetary outcomes and stated probabilities, but it can be extended to more involved choices. Kahneman and Tversky (1979) summarised it as follows:

“Prospect theory distinguishes two phases in the choice process: an early phase of editing and a subsequent phase of evaluation. The editing phase consists of a preliminary analysis of the offered prospects. In particular*, people set a reference point and consider lower outcomes as losses and higher outcomes as gains in which case gains and losses coincide with the actual amounts that are received or paid. In the second phase, the edited prospects are evaluated and the prospect of highest value is chosen.” (Kahneman and Tversky, 1979: 274).

The idea that the carriers of utility are changes of wealth rather than asset positions was described as the cornerstone of prospect theory (Kahneman and Tversky, 1979). This statement implied that people normally perceive outcomes as gains and losses, rather than as final states of wealth or welfare.

One novelty of prospect theory was that it was explicitly presented as a formal descriptive theory which tries to model real-life choices, rather than optimal decisions (Kahneman, 2003). In developing this theory, the psychologists argued that people are not as calculating as economic models assume, instead they repeatedly make errors in judgement that can be predicted and categorised (Trei, 2002). For his joint work in prospect theory with the late Amos Tversky, Kahneman received the Nobel Prize in Economics in 2002 (officially titled The Bank of Sweden Prize in Economic Sciences in Memory of Alfred Nobel), “for having integrated insights from psychological research into economic sciences, especially concerning human judgement and decision-making under uncertainty” (Nobelprize.org, 2002).

2.3.1 The Heuristics and Biases Programme of Research

Inspired by the ideas of Herbert Simon, Kahneman and Tversky developed their own perspective on bounded rationality. Their research attempted to obtain a map of bounded rationality, by exploring the systematic biases that separate the intuitive
beliefs people have and the choices they make from the optimal beliefs (Kahneman and Tversky, 1973; Tversky and Kahneman, 1974; Kahneman, Slovic and Tversky, 1982). Kahneman and Tversky defined intuition as “thoughts and preferences that come to mind quickly and without much reflection” (Kahneman, 2002: 449). Their research focused on errors of intuition and was guided by the idea that intuitive judgements occupy a position between the automatic operations of perception and the deliberate operations of reasoning. In the terminology that became accepted much later, Kahneman and Tversky held a two-system view, which distinguished intuition from reasoning.

Kahneman (2000: 682) stated that “in decision theory, rationality is defined by the coherence of beliefs and preferences, not by the ability to reason correctly about immediately available information”. Kahneman and Tversky proposed that intuitive judgements of probability or frequency are based on ‘natural assessments’ of similarity, causality, affective valence, or past frequency which are effortless and largely automatic (Kahneman, 2000).

The first research programme Kahneman and Tversky undertook together consisted of a series of studies of various types of judgement about uncertain events, including numerical predictions and assessments of the probabilities of hypotheses (Tversky and Kahneman, 1971; Kahneman and Tversky, 1972; Kahneman and Tversky, 1973; Tversky and Kahneman, 1973; Tversky and Kahneman, 1974). The central idea of the ‘heuristics and biases’ programme was that judgement under uncertainty often rests on a limited number of simplifying heuristics rather than extensive algorithmic processing (Kahneman et al, 1982). The programme suggested that ordinary people are ‘cognitive misers’ who use little information and little cognition, and thus are largely unable to estimate probabilities and risks (Gigerenzer and Todd, 1999). The conclusion in a review of this work was that “people rely on a limited number of heuristic principles which reduce the complex tasks of assessing probabilities and predicting values to simpler judgemental operations. In general, these heuristics are quite useful, but sometimes they lead to severe and systematic errors” (Tversky and Kahneman, 1974: 1124).
The term 'heuristic' is of Greek origin, meaning "serving to find out or discover" (Gigerenzer, Todd and The ABC Research Group, 1999: 25). From its introduction into English in the early 1800s up until about 1970, 'heuristic' referred to useful, even indispensable cognitive processes for solving problems that cannot be handled by logic and probability theory. After 1970, a second meaning emerged in the field of psychology and decision making research: overused, mostly dispensable cognitive processes that people often misapply to situations where logic and probability theory should be applied instead (Tversky and Kahneman, 1974). With this description, a very different notion emerged in psychology in the early 1970s, emphasising how the use of heuristics can lead to systematic errors and lapses of reasoning that indicate human irrationality. Within the heuristics and biases programme launched by Tversky and Kahneman (1974), heuristics were often invoked as the explanation when errors, mainly deviations from the laws of probability, were found in human reasoning (Gigerenzer and Todd, 1999).

Although Tversky and Kahneman (1974) repeatedly asserted that heuristics sometimes succeed and sometimes fail, their experimental results were typically interpreted as indicating some kind of fallacy which was usually attributed to one of the three main heuristics that underlie many intuitive judgements under uncertainty: 'representativeness' (judgements influenced by what is typical); 'availability' (judgements based on what comes easily to mind); and 'adjustment and anchoring' (judgements relying on what comes first) (Kahneman and Tversky, 1973; Tversky and Kahneman, 1974; Kahneman et al, 1982; Kahneman, 2002, 2003). Gilovich and Griffin (2002: 4) argued that these heuristics were proposed as a set of highly efficient "mental shortcuts" that provide subjectively compelling and often quite serviceable solutions to judgemental problems, however not exact or perfectly accurate. The first three heuristics of judgement was later followed by the development of a fourth one called 'simulation heuristic' (judgements based on the mental construction of examples or scenarios) (Kahneman and Tversky, 1982). The idea of an 'affect heuristic' (judgements guided by positive or negative feelings) by Slovic, Finucane, Peters and MacGregor (2002) came much later in 2002 and was regarded as one of the most important developments in the study of judgement heuristics in the last decades.
Representativeness

Kahneman and Tversky explained that people typically rely on the representativeness heuristic, in which probabilities are evaluated by the degree to which A is representative of B, that is, by the degree to which A resembles B. This assessment invariably leads to the inference that A and B are connected probabilistically, simply because they bear some resemblance to each other in terms of their descriptive features (Saks and Kidd, 1980). In a demonstration of this effect it was observed that people often predict by selecting the outcome (e.g. an occupation) that is most representative of the input (e.g. the description of a person) (Tversky and Kahneman, 1974).

For example, the probability that Steve is a librarian is assessed by the degree to which he is representative of or similar to the stereotype of a librarian. The confidence people have in their prediction depends primarily on the degree of representativeness, that is, on the quality of the match between the selected outcome and the input. Thus, people express great confidence in the prediction that a person is a librarian when given a description of his personality which matches the stereotype of librarians, even if the description is unreliable or outdated. Tversky and Kahneman (1974) argued that this approach to the judgement of probability leads to serious errors, because similarity or representativeness is not influenced by several factors that should affect judgements of probability.

Another study in the same design involved one of the best-known characters in the heuristics and biases literature. In this example, the respondents were given the following description:

"Linda is 31 years old, single, outspoken and very bright. She majored in philosophy. As a student she was deeply concerned with issues of discrimination and social justice and also participated in antinuclear demonstrations." (Kahneman, 2002: 468).

Respondents were shown the description of Linda and a list of eight possible outcomes describing her present employment and activities. The two critical items in the list were #6 "Linda is a bank teller" and the conjunction item #8 "Linda is a bank
teller and active in the feminist movement". The other six possibilities were unrelated and miscellaneous. Some respondents ranked the eight outcomes by representativeness, others ranked the same outcomes by probability. The ordering of the two items was reasonable for judgements of similarity: Linda does resemble the image of a feminist bank teller more than she resembles a stereotypical bank teller. However, the reliance on representativeness as a heuristic attribute yields a pattern of probability judgements that violates monotonicity\(^1\), and has been called the "conjunction fallacy" (Tversky and Kahneman, 1983: 293). The conjunction fallacy is an anomaly in human reasoning for which the conjunction of two events is rated more likely to occur than one of the events alone (Zizzo, Stolarz-Fantino, Wen and Fantino, 2000).

**Availability**

A second heuristic discussed by Tversky and Kahneman is availability. According to this heuristic, people are likely to judge the probability or frequency of an event based on the ease with which they can recall instances or occurrences of the event. The researchers noted that availability may be a helpful cue when assessing probability, because events that are more frequent may be recalled better and faster than events that occur less frequently. However, availability is affected by factors other than frequency and probability, such as familiarity and salience which affect the retrievability of instances. Furthermore, recent occurrences are likely to be relatively more available than earlier occurrences and enhance the potency of the availability heuristic.

For example, in a demonstration of the availability effect, subjects heard a list of well-known personalities of both sexes and were subsequently asked to judge whether the list contained more names of men than of women. In actuality, the numbers of men and women were equal. Different lists were presented to different groups of subjects. In some of the lists the men were relatively more famous than the women, and in others the women were relatively more famous than the men. In each

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\(^1\) Monotonicity concerns the choice between arguments. Judgement is called 'monotonic' if the first argument of the pair is deemed stronger (Lo, Sides, Rozelle and Osherson, 2002).
of the lists, the subjects erroneously judged that the class (i.e. gender) that had the more famous personalities was the more numerous. (Tversky and Kahneman, 1974). Consequently, it was concluded that reliance on availability leads to predictable biases.

**Adjustment and Anchoring**

Tversky and Kahneman (1974) stated that when making certain types of judgements, people often start with an initial estimate and then make adjustments or revisions of these initial estimates. However, it is often the case that the adjustments depend heavily on initial values that often lead to different final estimates. This phenomenon is known as anchoring. This heuristic is usually employed in numerical prediction when a relevant value is available.

For example, to illustrate the anchoring effect, two groups of high school students were given one of two problems to solve. One group was asked to estimate, without the aid of paper and pencil, the product of the sequence of numbers from eight to one. The other group was asked to estimate the product of the same numbers presented in ascending order. Usually the students simply multiplied together the first two or three numbers and then extrapolated from this product to the final guess. If this was indeed how they performed the calculations to arrive at a final product, then the anchoring principle should have caused the first (descending) group to judge the final product as larger than the second (ascending) group. In fact, this was the case although the correct answer was supposed to be the same in both cases. With this experiment Tversky and Kahneman (1974) concluded that people were influenced by an initial anchor value and the adjustment was often insufficient.

**Simulation Heuristic**

Kahneman and Tversky discussed two classes of mental operations under the availability heuristics: the retrieval of instances, and the construction of examples or scenarios, which are quite different ways of bringing things to mind. Past research has mainly dealt with the retrieval of instances from memory, and the process of
mental construction has been relatively neglected. To advance the study of availability for construction, the authors have sketched a mental operation that they labelled the "simulation heuristic" (Kahneman et al, 1982: 201).

Kahneman and his colleagues (1982) argued that there appear to be many situations in which questions about events are answered by an operation that resembles the running of a simulation model. The simulation can be constrained and controlled in several ways, and does not necessarily produce a single story which starts at the beginning and ends with a definite outcome. Rather, people interpret the output of simulation as an assessment of the ease with which the model could produce different outcomes, given its initial conditions and operating parameters. Thus, the mental simulation yields a measure of the propensity of one's model of the situation to generate various outcomes. The ease with which the simulation of a system reaches a particular state is eventually used to judge the propensity of the real system to produce that state.

Kahneman and Tversky (1982) argued that assessments of propensity and probability derived from mental simulations are used in several tasks of judgement, and also that they play a significant role in several affective states. Some judgemental activities in which mental simulation appears to be involved are: prediction, assessing the probability of a specified event, assessing conditioned probabilities, counterfactual assessments, and assessments of causality.

Initial investigations of the simulation heuristic have focused on counterfactual judgements. In particular, the authors have been concerned with the process by which people judge that an event 'was close to happening' or 'nearly occurred'. The psychological significance of this assessment of distance between what happened and what could have happened is observed on the cognitive rules that govern the mental undoing of past events. Kahneman and Tversky (1982) stated that the construction of scenarios is used as a heuristic to assess the probability of events by a mediating assessment of the propensity of some causal system to produce these events. An assessment of the 'goodness' of scenarios can serve as a heuristic to judge...
the probability of events. Like any other heuristic, the simulation heuristic is associated with a risk of large and systematic errors.

Affect Heuristic

Slovic et al (2002) asserted that images, marked by positive and negative affective feelings, guide judgement and decision making. The authors used the term ‘affect’ to mean the specific quality of “goodness” or “badness” (Gilovich, Griffin and Kahneman, 2002: 397) experienced as a feeling state (with or without consciousness) and defining a positive or negative quality of a stimulus. They argued that reliance on such feelings can be characterised as the ‘affect heuristic’. It is proposed that people use an affect heuristic to make judgements, that is, representations of objects and events in people’s minds are “tagged” (Slovic et al, 2002: 400) to varying degrees with affect. In the process of making a judgement or decision, people consult or refer to an ‘affect pool’ containing all the positive and negative tags consciously or unconsciously associated with the representations.

Slovic et al (2002) argued that just as imaginability, memorability and similarity serve as cues for probability judgements (e.g. the availability and representativeness heuristics), affect may serve as a cue for many important judgements and decisions (Kahneman et al, 1982). Affective responses tend to occur rapidly and automatically. Using an overall, readily available affective impression can be far easier and more efficient than weighing the pros and cons, or retrieving from memory many relevant examples, especially when the required judgement or decision is complex or mental resources are limited. This characterisation of a mental shortcut leads to labelling the use of affect a “heuristic” (Slovic et al, 2002: 400).

Several empirical studies have demonstrated a strong relationship between imagery, affect, and decision making. Many of these studies used a word-association technique which involves presenting subjects with a target stimulus, usually a word or very brief phrase, and asking them to provide the first thought or image that comes to mind. The process is then repeated a number of times or until no further associations are generated. A study by Alhakami and Slovic (1994, cited in Slovic et
al, 2002) found that the inverse relationship between perceived risk and perceived benefit of an activity was linked to the strength of positive or negative affect associated with that activity. This result implies that people base their judgements of an activity or a technology not only on what they think about it, but also on what they feel about it. If they like an activity, they are moved to judge the risks as low and the benefits as high; if they dislike it, they tend to judge the opposite — high risk and low benefit.

Slovic et al (2002) explained that like other heuristics that provide efficient and generally adaptive responses (but which occasionally lead us astray), reliance on affect can also deceive us. There are two important ways that experiential thinking misguides us: one results from the deliberate manipulation of our affective reactions by those who wish to control our behaviours; the other results from the natural limitations of the experiential system and the existence of stimuli in our environment that are simply not amendable to valid affective representations.

2.3.2 Critique of Heuristics and Biases

Given that actual human reasoning has been described as “biased”, “fallacious”, or “indefensible” (Gigerenzer, 1991: 259), the most common critique of the research on heuristics and biases was that it offers an overly pessimistic assessment of the average person’s ability to make sound and effective judgements (Gilovich and Griffin, 2002). In response to this view, Kahneman (2000) stated that the purpose of studying deviations of human judgements and choices from standard rational models (e.g. Bayesian reasoning and expected utility theory) is to develop diagnostics for particular psychological processes (Kahneman, 2000).

Kahneman (1991) explained that the focus on error in the heuristics and biases research programme was due to two standard features of psychological methodology. The first is that the determinants of normal performance are commonly studied by inducing failures. In this context the heuristics of judgement and choice were identified by the biases they tend to produce. The second reason for the emphasis on errors was that the proximal objective of most psychological research is the rejection
of a plausible or otherwise respectable null hypothesis. Kahneman (1991) asserted that psychologists study errors because the logic of belief and choice is a rich source of null hypotheses, and because the prestige of the rational model makes these null hypotheses sufficiently interesting to deserve refutation. Kahneman (2000) asserted that the biases that heuristics induce are not constant errors. To conclude, one important aspect of heuristics and biases research programme of Tversky and Kahneman (1974) was to discover how to ‘debias’ people so they could overcome their erroneous heuristic decision making (Todd, 2007).

2.4 Gerd Gigerenzer: Fast and Frugal Heuristics

Gerd Gigerenzer is a psychologist who studied the use of bounded rationality and heuristics in decision making, especially in medicine. Gigerenzer is the director and founder of The Center for Adaptive Behavior and Cognition (ABC), an interdisciplinary research group founded in 1995 to study the psychology of bounded rationality and how good decisions can be made in an uncertain world at the levels of both individuals and social groups. The programme combines a strong theoretical focus with practical applications, that is, the research group both develops specific models and explores their applications. The theoretical focus is on rationality and can be divided into three aspects: bounded, ecological, and social rationality (Max Planck Institute for Human Development, 2007). A critic of the work of Kahneman and Tversky, Gigerenzer focused on how heuristics can be used to make optimal decisions rather than their production of cognitive biases.

2.4.1 Fast and Frugal Heuristics

A research programme in the spirit of Simon’s bounded rationality is the programme of ‘simple heuristics’, also referred to as ‘fast and frugal heuristics’ (Gigerenzer et al, 1999b). They are fast because they do not involve much computation and they do not integrate the acquired information in a complex and time-consuming way, instead the decision is based on just one single reason. They are frugal because they search for only some of the available information in the environment, that is, they stop searching for further information early in the process of information acquisition.
In this respect, fast and frugal heuristics employ a minimum of time, knowledge, and computation to make adaptive choices in real environments. They can be used to solve problems of sequential search through objects or options. They can also be used to make choices between simultaneously available objects, where the search for information (in the form of cues, features, and consequences) about possible options must be limited, rather than the search for the options themselves (Gigerenzer et al, 1999a). An important argument for simple heuristics is the high accuracy that they exhibit in simulations. This accuracy may be because of, not just in spite of, their simplicity (Hutchinson and Gigerenzer, 2005).

Herbert Simon (1990) once illustrated the logic of bounded rationality with the metaphor of a pair of scissors whose blades are cognitive heuristics and the structure of environments. He asserted that to understand behaviour, one has to look at both and how they fit together. In other words, to evaluate cognitive strategies as rational or irrational, one needs to also analyse the environment, because a strategy is rational or irrational only with respect to a particular (physical or social) environment (Simon, 1955). Accordingly, the study of bounded rationality is the analysis of the heuristics people use, the analysis of the structures of environments in which people make decisions, and the match between the two (Todd and Gigerenzer, 2001). The ABC programme studied simple decision heuristics of this sort that expands on Simon's own search for mechanisms of bounded rationality. The research programme has two interrelated components: the first is to study the heuristics that people actually use, and the second is to demonstrate in which environments a given heuristic performs well. The first one is called the study of the 'adaptive toolbox' and the second is the study of the 'ecological rationality' of heuristics (Hutchinson and Gigerenzer, 2005).

Gigerenzer et al (1999b) stated that different domains of thought require different specialised tools. This is the basic idea of the adaptive toolbox: "the collection of
specialised cognitive mechanisms that evolution has built into the human mind for specific domains of inference and reasoning, including fast and frugal heuristics” (Gigerenzer et al., 1999b: 30). Gigerenzer (2001) stated that there are various kinds of tools in the adaptive toolbox. One kind, Simon’s ‘satisficing’, involves search and an aspiration level that stops search, and the second kind is fast and frugal heuristics. The difference is that satisficing involves search across alternatives assuming that the criteria are given; in contrast, fast and frugal heuristics search for criteria or cues, assuming that the alternatives are given (Gigerenzer, 2001).

Gigerenzer (2001) argued that the heuristics in the toolbox are domain specific, not general; they are not good or bad, rational or irrational but only relative to an environment just as adaptations are context-bound. Thus, different environments can have different specific fast and frugal heuristics that exploit their particular information structure to make adaptive decisions. As a result, heuristics can perform astonishingly well when used in a suitable environment. Gigerenzer (2001) emphasised that the rationality of the adaptive toolbox is not logical, but rather ecological.

The goal of the study of ecological rationality is to provide an understanding of the particular decision mechanisms people and animals use to make good decisions given particular structures of information in the environment. Gigerenzer used the term “ecological rationality” (Gigerenzer et al., 1999b: 13) to mean that a heuristic is ecologically rational to the degree that it is adapted to the structure of an environment. Heuristics that are matched to particular environments allow agents to be ecologically rational, making adaptive decisions that combine accuracy with speed and frugality (Todd and Gigerenzer, 2003). Thus, simple heuristics and environmental structure can both work hand in hand to provide a realistic alternative to the ideal of optimisation, whether unbounded or constrained.

Although fast and frugal heuristics differ with respect to the problems they have been designed to solve, they share the same guiding construction principles. In particular, they are composed of three classes of building blocks: principles of ‘search’ direct how information is searched; principles of ‘stopping’ define when search is
terminated; and principles of ‘decision making’ specify how the information searched for is used to make a decision. In more detail, Todd and Gigerenzer (2003) described these building blocks as follows:

Search is a central concept in Simon’s notion of bounded rationality (Simon, 1955, 1956) and it refers to seeking information in memory or externally. When knowledge that can guide search is limited or absent, search can be simply random. With more available knowledge, options or information about options can be sought in some order determined by a criterion related to usefulness, or in an order based on a recollection about which options or cues worked previously when making the same type of judgement. To enable fast inferences and decisions, search for alternatives or information must be terminated at some point in a readily computable way. For example, one simple stopping rule is to cease searching for information about available alternatives, and make a decision as soon as the first cue or reason that favours one alternative is found.

Once search has been stopped, an inference or decision must be made. At this stage, fast and frugal heuristics can make use of simple decision strategies that follow naturally from the concepts of limited search and stopping, such that a decision or inference could be based on only one cue or reason, regardless the total number of cues found during search. Todd and Gigerenzer (2003) stated that different types of these building blocks can be put together to form a variety of fast and frugal heuristics. The adaptive toolbox, therefore, has a large number of heuristics at its disposal built from a smaller number of building blocks.

Rieskamp and Hoffrage (1999) stated that the principles of search, stopping and decision are connected to each other. For example, when a heuristic searches for only one cue, this constraints the possible decision rules to those that do not integrate information. Thus, if an individual does little search, then the process-oriented approach has strong implications for the possible character of the heuristic principle of decision. On the other hand, if search extends too many cues, this does not constrain the decision rule. The cues may be weighted and integrated, or only the best of them may determine the decision.
It is argued by these authors that the latter case illustrates the limits of the process-oriented approach, which focuses on search. If an individual acquires a large amount of information, this does not necessarily imply that the person also would base the decision on all of this information. Nevertheless, the underlying assumption of the process-oriented approach is that information search is related to the decision strategy, and hence characteristics of the search reveal important aspects of the decision strategy actually used by a person.

2.4.2 Classes of Fast and Frugal Heuristics

There are four main classes of heuristics in the adaptive toolbox that have received the most attention.

**Ignorance-Based Decision Making**

Goldstein and Gigerenzer (1999) asserted that some very simple heuristics can rely on a lack of knowledge to make appropriate decisions. The ‘recognition heuristic’ says that for choosing between two objects on some criterion, when one object is recognised and the other is not, then pick the recognised one (Todd, 2007). According to the assumptions of this heuristic, an object is said to be ‘recognised’ if it has been previously experienced (Goldstein and Gigerenzer, 1999). A decision maker who recognises the name of one object but not of a second one can use this pattern of recognition to infer that the recognised object has a higher value on a criterion.

The recognition heuristic can only be applied when one of the two objects is not recognised, that is, under partial ignorance. In other words, the recognition heuristic is so frugal that it actually requires a beneficial lack of knowledge to work (Goldstein and Gigerenzer, 1999). This heuristic can thus lead to a paradoxical situation where those who know more exhibit lower inferential accuracy than those who know less — this leads to the ‘less-is-more’ effect.
For example, in Goldstein and Gigerenzer’s (2002) Experiment 2, participants were presented with a series of pairs of German cities and asked to choose the city they believed to have the larger population. In addition to the city names, participants were taught some extra information about some of the cities in the sample that could be incorporated into the decisions. Before beginning the cities task, participants were given a training phase in which they were told that nine of the 30 largest cities in Germany have soccer teams, and that the nine cities with teams are larger than the 21 without teams in 78% of all possible pairs. They were also taught the names of four well-known cities that have soccer teams and four that do not. Participants were then tested on this knowledge, and were only allowed to continue in the study when they had recalled the information without error.

The critical pairs in the cities task that followed were those that included one unrecognised city and one recognised city that did not have a soccer team. Goldstein and Gigerenzer (2002) argued that, equipped with the knowledge from the training phase and placing no special emphasis on recognition, participants should have chosen the unrecognised city in such pairs. This is because from the information given, participants could work out that if a city does not have a soccer team, even if it is recognised, it is only likely to be larger than an unrecognised city in 22% of all possible pairs. Thus, any chance that the unrecognised city has a soccer team should lead participants to choose against the prediction of the recognition heuristic.

Despite being provided with this conflicting information, Goldstein and Gigerenzer (2002) reported that participants’ inferences followed those of the recognition heuristic on an average of 92% of the critical pairs. This finding was their key evidence for a one-cue, noncompensatory inference strategy. Goldstein and Gigerenzer proposed that “search terminates as soon as recognition has been assessed for both objects. The decision is consequently based on only one piece of information, recognition” (1999: 57).

Goldstein and Gigerenzer (1999) stated that the recognition heuristic is adaptive since in some situations missing information results in more accurate inferences than a considerable amount of knowledge can achieve. In these situations, the heuristic...
can be said to be ‘ecologically rational’, having the capacity to exploit structures of information in the environment in a simple and elegant way. The adaptive-toolbox framework predicts domain-specific and individual differences (Gigerenzer et al, 1999b). The overall validity of the recognition cue should therefore depend on characteristics of the given domain: “The recognition heuristic is domain-specific in that it works only in environments where recognition is correlated with the criterion” (Goldstein and Gigerenzer, 1999: 41). Thus, applying the heuristic would be beneficial in some, but not in other domains.

Newell and Shanks (2004) criticised that the design Goldstein and Gigerenzer used in their experiment was perhaps not ideally suited to test the strong claim about the irrelevance of further knowledge about recognised alternatives. The authors argued that, firstly, the design did not require participants to learn about the validity of information in an incremental fashion, rather it relied on participants integrating information about percentages provided at training into their test decisions. Secondly, and more importantly, because the study did not include a critical control group (i.e. a group whose members were not taught the soccer team information), it was not possible to conclude whether the soccer team information had any effect on performance.

Studies on recognition heuristic undertaken by various researchers (Pohl, 2006; Newell and Shanks, 2004; Newell and Fernandez, 2006; Richter and Spath, 2006) suggested that there is no experimental evidence that people indeed use recognition in a noncompensatory manner, that is, without consulting their knowledge about the known alternative. In the experiments of Pohl (2006), detailed analysis showed that choosing the recognised object was influenced by further knowledge, thus contradicting the claim of a one-reason, noncompensatory decision making strategy.

Newell and Shanks (2004) found little evidence suggesting that recognition is treated any differently from other cues in the environment. The finding that participants learned about recognition-based information and relied on it appropriately counters the suggestion that recognition exerts a noncompensatory influence on decision making.
In the experiments conducted by Newell and Fernandez (2006) there was clear evidence that further knowledge was not inconsequential, but rather that it was used in a compensatory manner. The authors also found clear evidence for the graded rather than binary use of recognition information. In line with other previous studies, the results by Richter and Spath (2006) demonstrated that people do not always rely on recognition blindly whenever it discriminates between two alternatives. Rather, they consider additional information and integrate this information with knowledge about the recognised alternative. Taken together, the results appear to question the psychological reality of a distinct recognition heuristic.

One-Reason Decision Making

Heuristics in this class search for reasons or cues beyond mere recognition, either in recall memory or in external stores of information. They deliberately ignore information although it is available, and use only a single piece of information for making a decision (this is their common building block). Therefore, they can stop search as soon as the first reason is found that allows a decision to be made. A variety of heuristics in this class include the ‘Minimalist’, ‘Take The Last’, and ‘Take The Best’. All of these heuristics have the same stopping and decision rule building blocks (i.e. stop after the first discriminating cue, and use that cue alone to make the decision), but they differ in terms of the cue-search building block (Todd, 2007). For instance, the Minimalist heuristic looks at cues in a random order, while Take The Best looks at cues in order of their validity, that is, how often they point to the right choice. These are explained in more detail below.

Minimalist: Gigerenzer and Goldstein (1999) stated that the Minimalist has only the minimal intuition and the minimal knowledge. Nothing is known for instance about which cues are better predictors than others. The only thing a person needs to know is which direction a cue points, that is, whether it indicates a higher or a lower value on the criterion (Gigerenzer et al, 1999a). Consequently, the search strategy of Minimalist is to look up cues in random order and stop when it finds a cue that discriminates between the two objects (Czerlinski, Gigerenzer and Goldstein, 1999; Gigerenzer et al, 1999a).
Take The Last: Like the Minimalist, Take The Last only has an intuition in which direction a cue points, but not which cues are more valid than others. This heuristic differs from the Minimalist only in the search stage. It uses a heuristic principle for search that draws on a strategy known as an “Einstellung set” (Gigerenzer and Goldstein, 1999: 80). According to this, when people work on a series of problems they tend to start with the strategy that worked on the last problem when faced with a new, similar-looking problem, and thereby build up an Einstellung set of approaches to try. In this respect, for the first problem, Take The Last tries cues randomly like the Minimalist, but from the second problem onward it starts with the cue that stopped search the last time.

Take The Best: This heuristic is designed to infer which of two alternatives has a higher value on a quantitative criterion; for example, which of the two university professors earns more money based on cues such as gender, rank, or number of years in current rank (Garcia-Retamero et al, 2007a). Unlike the Minimalist and Take The Last, it is related to lexicographic strategies which signify that the cues are looked up on a fixed order of validity rather than a random search (Gigerenzer and Goldstein, 1999; Gigrenzer et al, 1999a; Chater, Oaksford, Nakisa and Redington, 2003). Take The Best tries cues in order, one at a time, searching for a cue that discriminates between the two objects in question. Once a discriminating cue is found, it serves as the basis for an inference, and all other cues are ignored. If this cue does not discriminate then the next-best cue is tried and so forth. Its motto is “take the best, ignore the rest” (Gigerenzer and Goldstein, 1999: 81). For instance, if gender discriminates between two professors, the inference is made that the male earns a higher salary, and no other information about rank or years of experience in current rank is considered (Czerlinski et al, 1999).

Gigerenzer and Goldstein (1999) stated that all three heuristics are candidates for the collection of heuristics in what is called the ‘adaptive toolbox’. None of these strategies can perform all possible inferences under uncertainty. For instance, all three are designed to make estimates about which of two objects is larger or more effective, however they cannot estimate the quantitative values of one object. Furthermore, Gigerenzer and colleagues (1999a) stated that these heuristics violate
two maxims of rational reasoning: they do not search for all available information, and they do not integrate information. Therefore Minimalist, Take The Last, and Take The Best are fast and frugal.

**Elimination Heuristics**

Ignorance-based and one-reason decision heuristics are most appropriate for tasks where one of two options must be selected. A third class of heuristics uses elimination, which is particularly useful when larger numbers of objects are involved in categorisation or estimation tasks. This heuristic uses cues one by one to cut down the set of remaining possible choices, stopping as soon as only a single category remains. Todd and Gigerenzer (1999, 2003) stated that in situations where categorisation must be performed quickly and cues take time to search for, this fast and frugal approach has clear advantages.

**Satisficing Heuristics for Sequential Search**

Todd and Gigerenzer (1999) explained that the previous three classes of heuristics are designed for situations in which all of the possible options are immediately available to the decision maker, that is, the categories of possible intentions are all known. However, a different class of heuristics is needed when alternatives as opposed to cue values take time to find, appearing sequentially over an extended period. In this type of choice task, a fast and frugal reasoner should limit not only the search for information (cues) about each alternative, but also the search for alternatives themselves. In such a case, Simon’s (1955, 1990) concept of ‘satisficing’ by means of aspiration levels provides a tool for choice. Accordingly, an aspiration level is set, and search for alternatives is stopped as soon as the aspiration is met. Todd and Gigerenzer (2003) stated that simple mechanisms for setting the aspiration level (and revising it), such as checking the first few alternatives and taking the best as the aspiration level for further search, can prove ecologically rational both in individual and mutual search.
2.5 Gary Klein: Recognition Primed Decision Making

Gary Klein is a research psychologist famous for his work in pioneering the field of ‘Naturalistic Decision Making’. By studying experts in their natural environment, he discovered that laboratory models of decision making could not describe decision making under uncertainty. In this respect, in 1985 he examined for the first time the life-or-death decisions made by highly experienced fire-fighters in the US Army in exceedingly time-pressured, real life situations. This project led to others with pilots, nurses, military leaders, nuclear power plant operators, chess masters, and experts in a range of other domains. In 1978, he founded Klein Associates in order to study a range of topics that are now described as the Naturalistic Decision Making framework (Klein, 1998).

2.5.1 Naturalistic Decision Making

Naturalistic Decision Making (NDM) can be defined as the study of “the way people use their experience to make decisions in field settings” (Zsambok, 1997: 4). The NDM framework is designed to investigate the strategies people use in performing complex, ill-structured, high-stakes tasks, under time pressure and uncertainty, with changing conditions, and in the context of team and organisational constraints (Klein, 1997a). In Klein’s view, NDM focuses on how people use their knowledge and experience by exploring the methods used by experts, working as individuals or in groups, to identify and assess their situations, make decisions, and take actions whose consequences are meaningful to them and to the larger organisation in which they operate (Zsambok, 1997; Lipshitz, Klein, Orasanu and Salas, 2001). NDM perceives decision making as being a process rather than a one-time, point specific event. In this view, it has broadened the focus of decision making from the decision event to the larger process of situation assessment (Zsambok and Klein, 1997).

Zsambok (1997) identified four themes of NDM: (1) task and setting involve ill-structured problems, uncertain, dynamic environments, shifting ill-defined or competing goals, action/feedback loops, time pressure, high stakes, multiple players, and organisational goals and norms; (2) subjects are experienced participants; (3)
locus of interest includes situation awareness, diagnosis, and plan generation rather than fixating on the moment of choice; and (4) the purpose of research is to describe the strategies people use rather than prescribing the strategies they ought to use.

Researchers working in the NDM framework have observed that for most high-stakes tasks, it is the people with experience who make the decisions, rather than novices. Therefore, NDM model’s focus is on experienced decision makers since only those who know something about the domain would usually be making high-stakes choices (Klein, 1998). Klein (1997b) asserted that people with experience can use their experience to generate a reasonable course of action as the first one considered. This assertion is based on the result described by Klein, Wolf, Militello and Zsambok (1995, cited in Klein, 1997b) on chess players, showing the high quality of the first move they considered.

**Cognitive Task Analysis**

In order to find out how skilled decision makers think, Cognitive Task Analysis (CTA) has been developed. It is a set of methods for identifying cognitive skills, or mental demands, needed to perform a task proficiently (Militello and Hutton, 1998). Klein (1998: 169) defined CTA as “the description of the expertise needed to perform complex tasks”. He explained the steps of CTA as follows:

Step 1 *Identify sources of expertise*: The aim is to find individuals whose experience is respected in the organisation, in order to learn how they see their job.

Step 2 *Assay the knowledge*: Once the sources of expertise are located, then the importance of knowledge has to be balanced against the costs of extracting it. The aim is to evaluate what will be gained from the project against its costs.

Step 3 *Extract the knowledge*: CTA methods have been developed for getting inside the heads of experts (Klein, 1998). These methods include structured interviews, interviews about actual events that were challenging, interviews about the concepts
experts use to think about a task, and simulated tasks that require the expert to think aloud during performance or respond to interview questions after completion.

Step 4 Codify the knowledge: Applied researchers use diagrams, charts, lists of critical cues, computer simulations of the experts' thought processes, annotated stories, transcripts of interviews, and even videotapes of interviews.

Step 5 Apply the knowledge: CTA has been used for training nurses to recognise cues for diagnosis of sepsis, to provide cognitive modelling of the troubleshooting strategies of expert programmers, and to show system designers what essential decisions have to be supported by interfaces. CTA can also be used for market research as well as for identifying consumers' decision strategies.

Militello and Hutton (1998) explained that CTA methods focus on describing and representing the cognitive elements that underlie goal generation, decision making and judgements. Although CTA often begin with high-level descriptions of the task based on observations or initial interviews, the bulk of the data collection occurs via in-depth interviews with subject matter experts. These interviews focus on gaining information about the cognitive strategies used to accomplish the task including situation assessment strategies, identification and interpretation of critical cues, metacognitive strategies, and important perceptual distinctions. According to Militello and Hutton (1998), one of the strengths of these methods is that they aid experts in articulating knowledge that is generally difficult to verbalise.

2.5.2 Recognition Primed Decision Making

Several models of decision making and decision-making research have emerged out of the NDM body of research. Most common among these is the 'Recognition Primed Decision' (RPD) model. The model focuses on experienced agents, working in complex, uncertain conditions, who face personal consequences for their actions. The model tries to describe rather than prescribe, and it addresses situation awareness and problem solving as part of the decision making process (Klein, 1997c). The RPD model attempts to describe what people actually do under conditions of time
pressure, ambiguous information, ill-defined goals, and changing conditions (Klein, 1997c). It postulates that under such conditions experts can make good decisions without having to perform extensive analysis. They are able to do so by employing their experience to recognise problems that they have previously encountered, and for which they already know solutions. Therefore, instead of analysing each problem as though it were a new encounter, experts use their experience to form mental simulations of the problem currently being encountered and use these simulations to suggest appropriate solutions. Evans (2007) stated that this application involves some explicit reasoning (sometimes mental simulations to check feasibility of solutions), but the key to intelligent action is the automatic retrieval process. This strategy allows experts to quickly make difficult decisions by saving them the time they would otherwise have used to decompose the situation into basic elements, and to perform analysis and calculations based on those elements (Howell, 1997; Beach, Chi, Klein, Smith and Vicente, 1997).

To summarise, the RPD model was developed on the basis of field studies of the way that experienced personnel actually make decisions. The model explains how people can use experience to react rapidly and make good decisions without having to contrast options. The model has been tested and supported by different research teams working in a variety of settings. In Klein’s (1998) view, the significance of the RPD model is that it appears to describe the decision strategy used most frequently by people with experience; it explains how people can use experience to make difficult decisions; and it demonstrates that people can make effective decisions without using a rational choice strategy.

**Research on Fire-Fighters**

The RPD model was developed on the basis of cognitive task analyses of firefighters. The initial research was designed to better understand how experienced commanders could handle time pressure and uncertainty. The purpose of this research was not to challenge traditional decision making but to conduct a descriptive inquiry. In the first interviews, Klein and colleagues asked the participants if they could recall a recent event that had been nonroutine and had
demanded special experience, then asked the commanders to go through it telling it in their own words. The researchers then tried to identify the decision points, i.e. times when several courses of action were open and how the choice was made.

In Klein’s (1998) naturalistic studies of decision making in groups, he asserted that very little rational decision making goes on in the sense of deliberation between alternatives. What typically happens is that, the proficient decision makers recognise the situation as typical and familiar (e.g. a typical fire or search-and-rescue job) and proceed to take action. They understand what types of goals make sense (so the priorities are set), which cues are important (so there is not an overload of information), what to expect next (so they can prepare themselves and notice surprises), and the typical ways of responding in a given situation. Klein (1998) stated that by recognising a situation as typical, they also recognise a course of action likely to succeed.

These findings were evident in the research with fire-fighters. Klein and his colleagues found that the commanders could reliably identify good options and evaluate an option without comparing it to any others. This is a case of singular evaluation, i.e. looking at one action at a time to see if it will work or can be made to work. Klein explained that it was not that the commanders were refusing to compare options, rather they did not have to compare options. The real finding was that they could come up with a good course of action from the start. Even when faced with a complex situation, the commanders could see it as familiar and know how to react. The study led to the conclusion that the commanders’ secret was that their experience let them see a situation, even a nonroutine one, as an example of a prototype therefore they knew the typical course of action right away. Their experience let them identify a reasonable reaction as the first one they considered, so they did not bother thinking of others. According to Klein (1998) they were not being perverse, they were being skilful.
Research on Nurses

Crandall and Getchell-Reiter (1993) conducted a research project to study the way nurses could tell when a very premature infant was developing a life-threatening infection. They found that one of the difficult decisions the nurses had to make was to judge when a baby was developing a septic condition. When the premature babies develop an infection, it can spread through their entire body and kill them before the antibiotics can stop it. Therefore, noticing the sepsis as quickly as possible is vital. Somehow, the nurses in the Neonatal Intensive Care Unit could do this: they could look at a baby and tell the physician when it was time to start the antibiotic. The participating nurses all had experienced a limited number of such incidents where the cues varied from one case to the other. When they were asked how they were able to make these judgements, they could not describe it. Their answers were “it’s intuition” or “through experience”.

2.5.3 Klein’s Definition of Intuition

Klein (1998: 3) stated that people draw on a large set of abilities that are “sources of power”. The conventional sources of power include deductive logical thinking, analysis of probabilities, and statistical methods. Yet the sources of power that are needed in natural settings are usually not analytical at all, but involve the power of intuition, mental simulation, metaphor, and storytelling. Klein (1998) explained that the power of intuition enables us to size up a situation quickly; the power of mental simulation lets us imagine how a course of action might be carried out; the power of metaphor lets us draw on our experience by suggesting parallels between the current situation and something else we have come across; and the power of storytelling helps us consolidate our experiences to make them available in the future.

Klein (1998: 33) defined intuition as “recognising things without knowing how we do the recognising”. He explained that intuition depends on “the use of experience to recognise key patterns that indicate the dynamics of the situation” (Klein, 1998: 31). Because patterns can be subtle, people often cannot describe what they noticed, or how they judged a situation as typical or atypical. In the simple version of the RPD
model, people size the situation up and immediately know how to proceed: which goals to pursue, what to expect, how to respond. Klein's claim was that intuition grows out of experience and that the RPD model is a model of intuition (Klein, 1998). He suggested that some aspects of intuition come from the ability to use experience to recognise situations and know how to handle them. However, he stated, intuition is not infallible: our experience will sometimes mislead us, and we will make mistakes that add to our experience base.

2.5.4 Mental Simulation and Decision Making

Decision researchers refer to mental simulation as the "ability to imagine people and objects consciously and to transform those people and objects through several transitions, finally picturing them in a different way than at the start" (Klein, 1998: 45). Klein (1998) explained that mental simulation serves several functions in nonroutine decision making: it helps us to explain the cues and information we have received so that we can figure out how to interpret a situation and diagnose a problem; it helps us to generate expectancies by providing a preview of events as they might unfold and by letting us run through a course of action in our minds so we can prepare for it; and it lets us evaluate a course of action by searching for pitfalls so we can decide whether to adopt it, change it, or look further. Mental simulation shows up in at least three places in the RPD model:

Situation awareness: Mental simulation is one way to make sense of events and form an explanation. When people use mental simulation to derive a plausible explanation, they feel that they have diagnosed the situation. The diagnosis is a mental simulation that weaves together different events into a story that shows how the causes led to the effects. Situation awareness can be formed rapidly through intuitive matching of features, or deliberately through mental simulation. Sometimes a situation reminds us of a previous event, and we try to use this analogy to make sense of what is happening. At times there are several competing explanations, and we may have to compare them. Usually we scan each explanation to see if there are elements that do not seem plausible, so we can reject the less likely ones and keep the best.
Expectancies: In diagnosing a situation, people construct mental simulations of how the events have been evolving and will continue to evolve. The more experienced the decision makers are, the more clear-cut are the expectancies. By checking whether the expectancies are satisfied, the decision maker can judge the adequacy of the mental simulation. The greater the violations and the more effort it takes to explain away conflicting evidence, the less confident the decision maker feels about the mental simulation and diagnosis.

Courses of action: When people size up a situation they will be aware of some typical ways of reacting to it. In variation 1 of the RPD model, the person just chooses the first action thought of, without deliberating about the little details. However, that simple model does not describe the major decisions. Klein (1998) explained how to use mental simulation to evaluate a new course of action, which is variation 3 of the RPD model (see Klein, 1998). Research with the fire ground commanders showed that when they needed to evaluate a course of action, they used the strategy of mental simulation.

Klein (1998) asserted that the person assembling a mental simulation needs to have a lot of familiarity with the task, and needs to be able to think at the right level of abstraction. If the simulation is too detailed it can use up memory space, however if too abstract it does not provide much help. According to Klein, mental simulations run from the past into the present or the present into the future, can stretch to help people infer a missing cause, a missing effect, or a bridge between the two. However, they can also mislead us. Klein explained that the fact that the mental simulations can sometimes be wrong is not a weakness. His estimate is that most of the time they are fairly accurate. Besides, he considers them as a means of generating explanations, not generating proofs. Despite its shortcomings, Klein (1998) stated that mental simulation allows us to make decisions skilfully and solve problems under conditions where traditional decision analytical strategies do not apply.
2.5.5 Intuition and Expertise

According to Klein (1998), the key to effective decision making is to build up expertise. What distinguishes experts from novices can be tied to two primary sources of power: pattern matching (i.e. intuition) and mental simulation.

Klein (1997a) identified the following strategies for developing expertise in judgement and decision making: (1) engaging in deliberate practice; (2) using attentional control exercises to practise flexibility in scanning situations; (3) sampling alternative task strategies; (4) compiling an extensive experience bank; (5) obtaining feedback that is accurate, diagnostic, and reasonably timely; (6) enriching experiences by reviewing prior experiences to derive new insights and lessons from mistakes; (7) building mental models; and (8) obtaining coaching (see Klein, 1997a for full details).

Ericsson and Charness (1994) stated that expert performance reflects extreme adaptations accomplished through life-long effort to demands in restricted and well-defined domains. In their study on expert performance, Ericsson and Charness (1994) showed evidence from a wide range of domains that the top-level experts spend a very large amount of time on deliberate practice, improving their performance, and that the total amount accumulated during development is several years of additional full-time practice more than that of other less accomplished performers.

Dreyfus and Dreyfus (2005: 779) argued that “expertise in general cannot be captured in rule-based expert systems, since expertise is based on the making of immediate, unreflective situational responses; intuitive judgement is the hallmark of expertise”. The authors stated that deliberation is certainly used by experts if time permits, but it is done for the purpose of improving intuition, not replacing it. Dreyfus and Dreyfus (2005) proposed a five-stage model of the acquisition of expertise.

Stage 1 Novice: Normally, the instruction process begins with the instructor decomposing the task environment into context-free features that the beginner can
recognise without the desired skill. The beginner is then given rules for determining actions on the basis of these features, like a computer following a programme.

Stage 2 Advanced Beginner: As the novice gains experience actually coping with real situations, begins to develop an understanding of the relevant context. After seeing a sufficient number of examples, the student learns to recognise these new aspects. Still, at this stage, learning can be carried on in a detached, analytic frame of mind, as the student follows instructions and is given examples. However, to progress further seems to require a special kind of involvement.

Stage 3 Competence: With more experience, the number of potentially relevant elements and procedures that the learner is able to recognise and follow becomes overwhelming. To cope with this overload and to achieve competence, people learn (through instruction or experience) to devise a plan or choose a perspective that then determines which elements of the situation or domain must be treated as important and which ones can be ignored. Naturally, to avoid mistakes, the competent performer seeks rules and reasoning procedures to decide which plan or perspective to adopt. Only at this level there is an emotional investment in the choice of action. The emotional involvement seems to play an essential role in switching over from a left-hemisphere analytic approach to a right-hemisphere holistic one.

Stage 4 Proficiency: The resulting positive and negative emotional experiences will strengthen successful responses and inhibit unsuccessful ones, and the performer’s theory of the skill, as represented by rules and principles, will gradually be replaced by situational discriminations, accompanied by associated responses. However, the proficient performer has not yet had enough experiences with the outcomes of the wide variety of possible responses to each of the situations to react automatically. Thus, after spontaneously seeing the point and the important aspects of the current situation, the proficient performer must still decide what to do. To decide, he or she must fall back on detached rule and maxim following.

Stage 5 Expertise: The proficient performer, immersed in the world of skilful activity, sees what needs to be done, but decides how to do it. The expert, on the
other hand, not only sees what needs to be achieved, he or she also sees immediately how to achieve the goal. Thus, the ability to make more subtle and refined discriminations is what distinguishes the expert from the proficient performer. Among many situations, the expert has learned to distinguish those situations requiring one reaction from those demanding another. That is, with enough experience in a variety of situations, all seen from the same perspective but requiring different tactical decisions, the brain of the expert gradually decomposes the class of situations into subclasses, each of which requires a specific response. This allows the immediate intuitive situational response that is characteristic of expertise. We can see now that a beginner calculates using rules and facts just like a heuristically programmed computer, but with talent and a great deal of involved experience, the beginner develops into an expert who intuitively sees what to do without recourse to rules.

Recent research in different domains of expertise has shown that expert performance is predominantly mediated by acquired complex skills and physiological adaptations. The acquisition of memory skill in a domain is integrated with the acquisition of skill in organising acquired knowledge and refining of procedures and strategies, and it allows experts to circumvent limits on working memory imposed by the limited capacity of STM (Ericsson and Charness, 1994).

Ericsson and Charness (1994) stated that experts’ internal representation of the relevant information about the situation is critical to their ability to reason, to plan out, and to evaluate consequences of possible actions. According to Ericsson and Charness (1994), the critical aspect of experts’ working memory is not the amount of information stored per se, but rather how the information is stored and indexed in the LTM. In support of this claim, several cases have been reported in which non-experts have been able to match the amount of domain-specific information recalled by experts, but without attaining the expert’s sophisticated representation of the information.

In their skilled memory theory, Chase and Ericsson (1982) explained experts’ remarkable memory and problem solving abilities through three principles: (1)
information is encoded with numerous and elaborated cues related to prior knowledge; (2) experts develop a retrieval structure, that is, a LTM structure for indexing material in LTM; and (3) time required for encoding and retrieval operations decreases with practice.

The skilled memory theory has been extended into the long-term working memory (LTWM) theory by Ericsson and Kintsch (1995). They presented compelling empirical evidence that experts in various domains are able to encode information into LTM faster than was proposed by traditional models of human memory. The core of their LTWM theory is that “cognitive processes are viewed as a sequence of stable states representing end products of processing” and that “acquired memory skills allow these end products to be stored in long-term memory and kept directly accessible by means of retrieval cues in short-term memory” (Ericsson and Kintsch, 1995: 211). A key element in the LTWM theory, which distinguishes it from most other theories of memory, is that experts develop, through practice and study, retrieval structures (a set of retrieval cues that are organised in a stable structure) for the task domain.

2.6 Paul Slovic: The Affect Heuristic

Although affect has long played a key role in many behavioural theories, it has rarely been recognised as an important component of human judgement and decision making (Finucane, Alhakami, Slovic and Johnson, 2000). The main focus of descriptive decision research has been cognitive, rather than affective. Despite this cognitive emphasis, the importance of affect is being recognised increasingly by decision researchers (Slovic et al, 2002, 2007; Zajonc, 1980; Isen, 1993; Janis and Mann, 1977; Johnson and Tversky, 1983; Loewenstein, Weber, Hsce and Welch, 2001; Mellers, Schwartz, Ho and Ritov, 1997).

As explained earlier (in section 2.3.1), the term ‘affect’ is used to refer to the specific quality of “goodness” or “badness” (Gilovich et al, 2002: 397) experienced as a feeling state (with or without consciousness), and demarcating a positive or negative quality of a stimulus (Slovic et al, 2002: 397). Zajonc (1980) argued that affective
reactions to stimuli are often the very first reactions, occurring automatically and subsequently guiding information processing and judgement. According to Zajonc, all perceptions contain some affect. Therefore, “we do not just see ‘a house’: we see a handsome house, an ugly house, or a pretentious house” (Zajonc, 1980: 154).

Affect plays a central role in dual-process theories (see Chaiken and Trope, 1999) of thinking, knowing, and information processing (Slovic et al, 2002, 2007). The ‘analytical system’ uses algorithms and normative rules, such as probability calculus, formal logic, and risk assessment. It is relatively slow, effortful, and requires conscious control. In contrast, the ‘experiential system’ is intuitive, fast, mostly automatic, and not very accessible to conscious awareness.

“It was the experiential system, after all, that enabled human beings to survive during their long period of evolution. Long before there was probability theory, risk assessment, and decision analysis, there were intuition, instinct, and gut feeling to tell us whether an animal was safe to approach or the water was safe to drink.” (Slovic, Finucane, Peters and MacGregor, 2004: 313)

Slovic et al (2004) argued that as life became more complex and humans gained more control over their environment, analytic tools were invented to ‘boost’ the rationality of our experiential thinking. Subsequently, analytical thinking was placed on a pedestal and portrayed as the fundamental nature of rationality. However, current wisdom suggests that the rational and experiential systems operate in parallel and each seems to depend on the other for guidance. Studies have demonstrated that analytic reasoning cannot be effective unless it is guided by emotion and affect (Slovic et al, 2004).

Slovic et al (2004) suggested that the affect heuristic enables us to be rational actors in many important situations, but not in all situations. The authors stated that it works well when our experience enables us to anticipate accurately how we will like the consequences of our decisions. However, it fails miserably when the consequences turn out to be much different in character than we anticipated.
2.6.1 Affective Impressions in Decision Making

The concept of evaluability has been proposed as a mechanism mediating the role of affect in decision processes. Affective impressions vary not only in their valence (i.e. goodness, badness, or likeability), but in the precision with which they are held. There is growing evidence that the precision of an affective impression substantially impacts judgements. In particular, Hsee (1996, 1998) has proposed the notion of evaluability to describe the interplay between the precision of an affective impression and its meaning or importance for judgement and decision making.

Evaluability is illustrated by an experiment in which Hsee (1996) asked people to assume they were looking for a used music dictionary. In a joint evaluation condition, participants were shown two dictionaries: A (with 10,000 entries in ‘like new’ condition) and B (with 20,000 entries and a torn cover), and were asked how much they would be willing to pay for each. Willingness-to-pay was far higher for Dictionary B, presumably because of its greater number of entries. However, when one group of participants evaluated only A and another group evaluated only B, the mean willingness to pay was much higher for Dictionary A.

Hsee (1996) explained this reversal by means of the evaluability principle. He argued that in separate evaluation without a direct comparison, the number of entries is hard to evaluate because the evaluator does not have a precise notion of how good 10,000 (or 20,000) entries is. However, the defects attribute is evaluable in the sense that it translates easily into a precise good/bad response and thus it carries more weight in the independent evaluation. Most people find a defective dictionary unattractive and a ‘like new’ dictionary attractive. Under joint evaluation, the buyer can see that B is far superior on the more important attribute, i.e. number of entries. Thus, the number of entries becomes evaluable through the comparison process.

According to the evaluability principle, the weight of a stimulus attribute in an evaluative judgement or choice is proportional to the ease or precision with which the value of that attribute (or a comparison on the attribute across alternatives) can be mapped into an affective impression. The essence of evaluability is that affect
conveys meaning upon information and the precision of the affective meaning influences our ability to use information in judgement and decision making. In other words, without affect, information lacks meaning and will not be given weight in decision making. Evaluability can thus be seen as an extension of the general relationship between the variance of an impression and its weight in an impression-formation task. Hsee's work on evaluability is noteworthy as it shows that even very important attributes may not be used by a judge or decision maker unless they can be translated precisely into an affective frame of reference (Bateman, Dent, Peters, Slovic and Starmer, 2007).

2.6.2 Functions of Affect in Judgement and Decision Processes

Integral affect (experienced feelings about a stimulus) and incidental affect (feelings such as mood states that are independent of a stimulus, but can be misattributed to it or can influence decision processes) have been used to predict and explain a wide variety of judgements and decisions (Schwarz and Clore, 1983). Peters, Vastfjall, Garling and Slovic (2006) argued that integral and incidental affect have four separable roles important to judgement and decision making processes.

First, affect can act as information. At the moment of judgement or choice, decision makers consult their feelings about a choice and ask "how do I feel about this?" (Schwarz and Clore, 2003). These feelings act as information to guide the judgement or decision processes (Slovic et al, 2002). The feelings themselves often are based on prior experiences and thoughts that are relevant to choice option but can be the result of a less relevant and ephemeral state of emotion (e.g. a mood).

Second, affect appears to serve as a common currency in judgements and decisions, allowing us to compare the values of very different decision options or information. By translating more complex thoughts into simpler affective evaluations, decision makers can compare and integrate good and bad feelings rather than attempt to make sense out of a multitude of conflicting logical reasons. This function is thus an extension of the affect-as-information function into more complex decisions that
require integration of information. It implies that affective information can be more easily and effectively integrated into judgements than less affective information.

Third, affect also appears to play a role as a spotlight in a two-step process. First, the extent or type of affective feelings (e.g. weak versus strong affect, or anger versus fear) focuses the decision maker on new information. Second, the new information (rather than the initial feelings themselves) is used to guide the judgement or decision.

Finally, affect appears to function as a motivator of information processing and behaviour. Chen and Bargh (1999, cited in Peters et al, 2006) linked affect to behavioural tendencies of approach and avoidance. Incidental mood states also have been shown to motivate behaviour as people tend to act to maintain or attain positive mood states (Isen, 2000).

2.6.3 Measurement of Imagery and Affect

One of the most fundamental psychological processes that people use to comprehend their world is affective evaluation (Damasio, 1994; Zajonc, 1980). MacGregor, Slovic, Dreman and Berry (2000) stated that typically affective evaluations are of the form good versus bad, attractive versus unattractive, or pleasant versus unpleasant (i.e. valence). In essence, affective evaluations vary along a bipolar dimension of positive versus negative impressions. Since they are a fundamental component of human information processing, affective evaluations can contribute significantly to other judgements about the same stimulus object (MacGregor et al, 2000).

One of the basic approaches for measuring affect relies on the method of images or word associations. Word association techniques are strongly rooted in the history of psychology and are capable of revealing the cognitive and affective elements of images people hold about complex stimuli. The method involves presenting subjects with a target stimulus, usually a word or very brief phrase, and asking them to provide the first thought or image that comes to mind. The process is then repeated a number of times or until no further associations are generated. Subjects are then
asked to rate each image on a scale ranging from very positive (e.g. +2) to very negative (e.g. -2), with a neutral point in the centre. Scoring is done by summing or averaging the ratings to obtain an overall imagery index. MacGregor et al (2000) used this technique in a study in which images were used to measure the affective meanings that influence people’s preferences for different cities and states.

A second measurement is derived from the semantic differential, a well-known psychological technique developed by Osgood to assess meaning (see Osgood, Suci and Tannenbaum, 1957). In this approach, the subject provides ratings of stimuli on a set of bipolar adjective scales. Each scale is comprised of a positive/negative adjective pair. The ratings for each scale can be analysed and studied separately, or the ratings can be averaged or summed to obtain an overall affective score.

MacGregor et al (2000) explained that the two approaches to measuring affect differ in the amount of structure provided to the respondent. In the case of word associations, relatively little structure is given with the advantage that respondents are free to express images in their own natural language terms. The disadvantage of this approach is that the content of the imagery may not be equivalent across respondents. The more structured approach offered by semantic differential scales overcomes this difficulty, but at the expense of constraining respondents’ expression of affect to the scales provided.

2.7 Seymour Epstein: Cognitive-Experiential Self-Theory

Cognitive-Experiential Self-Theory (CEST) was introduced by Epstein in 1973 (Epstein, 1973) as a global theory of personality. Since then, it has undergone considerable development and has been investigated in an extensive research programme. CEST is a psychodynamic theory (i.e. relating to the interplay of psychological processes) that posits two systems of information processing (i.e. rational and experiential), each functioning according to its own principles (Epstein, 1994). CEST is an example of dual-process theories which is the subject of the next section.
2.7.1 Dual Systems of Reasoning

Although dual-process theories come in a number of forms, what they have in common is the idea offered by Stanovich and West (2000) that there are two different modes of processing. In order to emphasise the prototypical view adopted, the two systems have simply been generically labelled System 1 and System 2. System 1 is characterised as contextually dependent, automatic, largely unconscious, associative, intuitive and implicit in nature. Thus, it is relatively undemanding in terms of its use of scarce cognitive resources. This system has as its goal the ability to model other minds in order to read intention and to make rapid interactional moves based on those modelled intentions. In contrast, System 2 processing is contextually independent, analytic, rule-based, and explicit in nature. Hence, it is relatively slow and makes greater demands on cognitive resources than its System 1 counterpart (Stanovich and West, 2000). Different forms of dual-process theories have been established by many cognitive and social psychologists. See Table 2.1 for examples.

Table 2.1 Dual-Process Theories

<table>
<thead>
<tr>
<th></th>
<th>System 1</th>
<th>System 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reber (1993)</td>
<td>Implicit cognition</td>
<td>Explicit learning</td>
</tr>
<tr>
<td>Epstein (1994)</td>
<td>Experiential system</td>
<td>Rational system</td>
</tr>
<tr>
<td>Sloman (1996)</td>
<td>Associative system</td>
<td>Rule-based system</td>
</tr>
<tr>
<td>Klein (1998)</td>
<td>Recognition primed decisions</td>
<td>Rational choice strategy</td>
</tr>
</tbody>
</table>

Source: Stanovich and West, 2000

For example, Sloman (1996) has asserted that human reasoning is a function of two systems that are designed to achieve different computational goals. One is ‘associative’ and operates reflexively. It draws inferences from a kind of statistical description of its environment by making use of the similarity between problem elements interpreted using such aspects of general knowledge as images, stereotypes and prototypes. The other system described by Sloman (1996) is ‘rule-based’ which tries to describe the world by capturing different kinds of structure that is logical, hierarchical and causal-mechanical.
Lakoff and Johnson (1999) stated that metaphorical, frame-based, and prototype reasoning are cognitive mechanisms that have developed in the course of human evolution to allow us to function as well as possible in everyday life. Therefore, it would be irrational not to use the cognitive mechanisms that in general allow us to function well overall. The authors claimed that if we did not reason automatically and unconsciously using prototypes and conceptual frames, we would probably not survive.

2.7.2 Cognitive-Experiential Self-Theory

A fundamental assumption of CEST is that individuals apprehend reality and thereby adapt to the environment by two information processing systems that are independent and interactive: a ‘rational system’ which is a verbal reasoning system, and an emotionally driven ‘experiential system’ which is a nonverbal automatic learning system (Epstein, Pacini, Denes-Raj and Heier, 1996; Epstein, 2008). A comparison of the experiential system and the rational system is shown in Table 2.2.

Epstein (1994) stated that the experiential system is assumed to have a much longer evolutionary history and to operate in animals as well as in humans. Due to their more highly developed brains, it is assumed that the experiential system processes information in far more complex ways in humans. According to Denes-Raj and Epstein (1994), the experiential system operates in an automatic, holistic, associationistic manner, and is primarily nonverbal. Although it encodes experience in the form of nonverbal concrete representations (e.g. images, feelings, physical sensations), it is able to generalise and to construct relatively complex models for organising experience and directing behaviour by the use of prototypes, metaphors, scripts and narratives (Denes-Raj and Epstein, 1994).

At the time, this was a new concept sometimes referred to as the “cognitive unconscious” (Epstein, 1994: 710) which holds that most information processing occurs automatically and effortlessly outside of awareness, a mode that is far more efficient than conscious deliberative thinking (Epstein, 1994). Lakoff and Johnson (1999: 13) claimed that “conscious thought is the tip of an enormous iceberg. It is the
A rule of thumb among cognitive scientists that unconscious thought is 95 percent of all thought — and that may be a serious underestimate. Moreover, the 95 percent below the surface of conscious awareness shapes and structures all conscious thought. If the cognitive unconscious were not there doing this shaping, there could be no conscious thought.

Table 2.2 Comparison of the Experiential and Rational Systems

<table>
<thead>
<tr>
<th>Experiential System</th>
<th>Rational System</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Preconscious</td>
<td>1. Conscious</td>
</tr>
<tr>
<td>2. Automatic</td>
<td>2. Deliberative</td>
</tr>
<tr>
<td>3. Concrete: Encodes reality in images, metaphors and narratives</td>
<td>3. Abstract: Encodes reality in symbols, words, and numbers</td>
</tr>
<tr>
<td>5. Associative: Connections by similarity and contiguity</td>
<td>5. Cause-and-effect relations</td>
</tr>
<tr>
<td>6. Intimately associated with affect</td>
<td>6. Affect-free</td>
</tr>
<tr>
<td>7. Operates by hedonic principle (what feels good)</td>
<td>7. Operates by reality principle (what is logical and supported by evidence)</td>
</tr>
<tr>
<td>8. Acquires its schemas by learning from experience</td>
<td>8. Acquires its beliefs by conscious learning and logical inference</td>
</tr>
<tr>
<td>11. Rapid processing: Oriented toward immediate action</td>
<td>11. Slower processing: Capable of long delayed action</td>
</tr>
<tr>
<td>12. Resistant to change: Changes with repetitive or intense experience</td>
<td>12. Less resistant to change: Can change with speed of thought</td>
</tr>
<tr>
<td>13. Crudely differentiated: Broad generalisation gradient; categorical thinking</td>
<td>13. More highly differentiated, nuanced thinking</td>
</tr>
<tr>
<td>15. Experienced passively and preconsciously: We are seized by our emotions</td>
<td>15. Experienced actively and consciously: We believe we are in control of our thoughts</td>
</tr>
</tbody>
</table>

Source: Epstein, 2008
Epstein (2008) stated that neither system according to CEST is superior to the other. Each has its strengths and limitations. The rational system is capable of solving abstract problems, planning, applying principles broadly across situations, and taking long-term considerations into account. The experiential system on the other hand is able to effortlessly direct behaviour in everyday life. It is a source of motivation and passion. Without it, the ability of people to engage in motivated behaviour would be seriously compromised (see Damasio, 1994). The experiential system can solve problems that are beyond the capacity of the rational system because they require a holistic rather than analytic orientation, because they depend on lessons from lived experiences, or because they require creativity via associative connections. According to Norris and Epstein’s findings (2007, cited in Epstein, 2008), the experiential system plays a particularly important role in creativity, humour, empathy, emotionality, and interpersonal relationships. Epstein (2008) asserted that without an experiential system, people would be like robots with computers in their heads: they would be incapable of feeling.

2.7.3 Role of Emotions in Experiential System

The experiential system is intimately associated with the experiences of affect, including ‘vibes’ which refer to subtle feelings of which people are often unaware, representing events in the form of concrete exemplars and schemas inductively derived from emotionally significant, intense or repetitive past experiences. Epstein (1994) summarised the sequence of reactions when a person responds to an emotionally significant event as follows: the experiential system automatically searches its memory banks for related events, including their emotional accompaniments. The recalled feelings influence the course of further processing and reactions, which in subhuman animals are actions and in humans are conscious and unconscious thoughts as well as actions. If the activated feelings are pleasant, they motivate actions and thoughts anticipated to reproduce the feelings. If the feelings are unpleasant, they motivate actions and thoughts anticipated to avoid feelings.

Damasio’s (1994) work is particularly relevant to the present discussion of the role of emotions. Damasio’s (1994) Somatic-Marker Hypothesis (SMH) offers a
physiological explanation to the operation of the experiential (i.e. intuitive) system. The main point of this hypothesis is that decision making is a process guided by emotions. Damasio argued that in reality many decisions are influenced by the power of ‘gut feel’. Before any kind of rational analysis is applied to a judgemental problem, if a bad outcome connected with a particular response comes to mind, an unpleasant gut feeling is experienced. Since this feeling is about the body, Damasio called it “somatic-marker” (Damasio, 1994: 173) from ‘soma’ the Greek word for body, and ‘marker’ because the gut feeling marks an image which serves to focus our attention on the potential outcome. On the affective aspect of SMH, Damasio (1994) stated that somatic markers are a special instance of feelings generated from secondary emotions. These emotions and feelings play a crucial role by helping us filter various possibilities quickly, even though our conscious mind might not be aware of it.

According to CEST, behaviour and conscious thought are guided by the joint operations of the two systems, with their relative influence being determined by various parameters including the nature of the situations, individual differences in style of thinking, and the degree of emotional involvement. Pollock’s (1991, cited in Stanovich, 2002) view offers an explanation of the relation between emotions and rationality. In Pollock’s model, System 1 is composed of ‘quick and inflexible’ (Q&I) modules including emotions that perform specific computations. On the other hand, System 2 processes are grouped under the term ‘intellection’ and refer to all explicit reasoning in the service of theoretical or practical rationality.

Stanovich (2002) asserted that if emotions are conceived as Q&I modules for practical reasoning, there are two ways in which the rational regulation of behaviour could go wrong. First, Q&I emotion modules might be missing or might malfunction. In this case, the automatic and rapid regulation of goals is absent and System 2 is faced with a combinatorial explosion of possibilities because the constraining function of the emotions is missing (cf. Damasio, 1994). A module failure of this type represents a case where there is not too much emotion but instead too little. The second way that behavioural regulation can go wrong has the opposite properties. In this case, the Q&I module has fired but it happens to be one of those instances where
the module's output is inappropriate and needs to be overridden by the controlled processing of System 2. In this situation, the emotions of the Q&I practical reasoning module are too pervasive and unmodifiable. The problem in this second case is indeed a problem of too much emotion, rather than too little. Consequently, this leads to the cliché that emotion interferes with rational thought. However, the absence of emotions is also problematic for behaviour and conscious thought.

Epstein (1994) explained that CEST assumes there is a ubiquitous influence of automatic thinking outside of awareness on conscious thinking and behaviour. In most situations, the automatic processing of the experiential system is dominant over the rational system because it is less effortful and more efficient, and accordingly is the default option. Moreover, because it is generally associated with affect, it is apt to be experienced as more compelling than is dispassionate logical thinking. Finally, since the influence is usually outside of awareness, the rational system fails to control it because the person does not know there is anything to control. The advantage of insight in such situations is that it permits control at least within limits.

The rational and experiential systems normally engage in seamless integrated interaction, but they sometimes conflict, experienced as a struggle between feelings and thoughts (Denes-Raj and Epstein, 1994). However, certain situations (e.g. solving mathematical problems) are readily identified as requiring analytical processing, whereas others (e.g. interpersonal behaviours) are more likely to be responded to in an automatic, experientially determined manner. Holding such situational features constant, the greater the emotional involvement the greater the shift in the balance of influence from the rational to the experiential system (Denes-Raj and Epstein, 1994).

2.7.4 CEST and Intuition

Epstein (2008) stated that, everything discussed about the experiential system is relevant to intuition since intuition is regarded as a subset of experiential processing. Intuition can be defined, according to CEST, as “the accumulated tacit information that a person has acquired by automatically learning from experience” (Epstein,
2008: 29). As intuition is automatically acquired from personal experience, it does not include other non-rationally derived beliefs that, although primarily influenced by the experiential system, were acquired in ways other than by personal experience. Intuition also does not include beliefs acquired from experience if people are able to articulate the source of the beliefs. Knowing the source of a non-rationally derived belief violates the requirement that an intuitive belief must be tacit. That is, a defining aspect of intuition is that it involves “knowing without knowing how one knows”, which gives intuition its aura of mystery (Epstein, 2008: 29).

2.8 A ‘New Wave’ of Intuition Research in Management

The fundamental conceptual and theoretical developments in the psychological and biological sciences that were necessary to build an integrative understanding of intuition’s role in organisational behaviour were themselves not consolidated until the 1990s. Therefore, at the beginning of the new millennium, management researchers were fortunate to have the pragmatic rationale (e.g. Burke and Miller, 1999; Parikh et al, 1994) and the conceptual and theoretical resources (i.e. Damasio, 1994; Epstein, 1994; Finucane et al, 2000; Klein, 1998) to enable them to embark on a more scientifically rigorous programme of intuition research and scholarship based on empirical and theoretical work. Table 2.3 summarises a range of definitions for intuition.

2.8.1 Selective Review of Empirical Studies

The empirically-based developments witnessed in the early 2000s drew on insights from Behavioural Decision Theory (BDT) and dual-process theories, and went beyond the reporting of frequencies and percents that characterised the descriptive and prescriptive work of the 1990s. Several groups of researchers in the USA, Europe, and beyond chose instead to deploy multivariate statistical techniques in medium- to large-sample cross-sectional studies to examine relationships between intuition and behaviour and performance, as well as pursuing construct validation issues.
One of the first significant studies of this type was that of Khatri and Ng (2000) who compared the use of intuition in strategic decision making across three industry types (type was a proxy for environment instability). Khatri and Ng's (2000: 57) justification for their research was that "although intuitive processes are critical for effective strategic decision making, there is little in the way of applied research on the topic [and] only a handful of serious scholarly work on the subject". Other cross-sectional studies have examined the relationships between intuition and performance in a variety of areas of business, for example small firm performance (e.g. Sadler-Smith, 2004), strategic decision preferences (Hough and ogilvie, 2005), project management (Leybourne and Sadler-Smith, 2006), performance in non-profit organisations (Ritchie, Kolodinsky and Eastwood, 2007), and strategic decision effectiveness (Elbanna and Child, 2007). By incorporating insights from dual-process theory, researchers also were able, on theoretical grounds, to challenge the orthodoxy of the unitary ('split-brain') position as it applied to individual differences in managers' information processing (i.e. cognitive) styles (see Hodgkinson and Sadler-Smith, 2003a; Hodgkinson, Sadler-Smith, Sinclair and Ashkanasy, 2009).

More recently, researchers have augmented hypothetico-deductive inquiry with other approaches in order to capture subjective experiences and retrospective accounts of intuition using inductively-driven methods. For example, on the basis of interviews with 14 loan officers in a large Israeli commercial bank, Lipshitz and Shulimovitz (2007) found that in rating the credibility of loan applicants, loan officers integrated 'hard' financial data with 'soft' impressions and gut feelings, but regarded feelings as more valid indicators of applicants' credit worthiness than they did relevant financial data. Woiceshyn (2009) studied how 19 oil company CEOs managed complex situations; she referred to the interplay between intuition and rational analysis as a three-loop 'spiralling' process (zooming-out/zooming-in; analysis-by-principles; testing the tentative decision). Hensman and Sadler-Smith (2011) used in-depth semi-structured interviews with 15 highly-experienced banking executives to study intuitive decision making in the finance sector. They found that reliance on intuition was related not only to the nature of the task (e.g. factors of time and uncertainty) and individual factors (e.g. participants' experience and confidence), but also organisational contextual factors (e.g. constraints and conventions, accountability
and hierarchy, team dynamics, and organisational culture). These recent qualitative studies are welcome; the processes of intuiting and associated intuitive outcomes present unique challenges and opportunities to intuition researchers wishing to ‘capture’ intuitions. The potential of the full range of methods has yet to be exploited (e.g. psycho-phenomenology, Critical Incident Technique, Experience Sampling Methods, and Day Reconstruction Method). Hodgkinson and Sadler-Smith (in press) provided a critical review of methods available for investigating intuition.

2.8.2 Selective Review of Conceptual and Theoretical Work

The 2000s have also witnessed a significant number of conceptual and theoretical advances which have built on the foundational work in BDT and NDM described above. For example, from the viewpoint of establishing valid intuitions, Hogarth (2001, 2010) suggested that opportunities for learning in ‘kind’, as opposed to ‘wicked’, environments are necessary conditions for the development of intuitive expertise. He defined ‘kind’ learning environments as those where the information tacitly processed leads to valid inferences, and the sample of experiences encountered is representative of the environment in which the ensuing intuitive judgement is applied, and is followed by feedback. On the other hand, ‘wicked’ learning environments refer to those whereby the samples of experience are not representative and feedback might be missing or distorted.

Building on the work of Hogarth (2001) and others, and in an initial attempt at a conceptual synthesis of NDM and SMH, Sadler-Smith and Shefy (2004) drew attention to the affective (‘intuition-as-affect’) and cognitive (‘intuition-as-expertise’) facets of intuition, and used this as a basis for recommendations to executives on how to make more effective use of intuition and develop better intuitive judgement skills. In parallel with these developments, Sinclair and Ashkanasy (2005: 357) defined intuition as a “non-sequential information processing mode, which comprises both cognitive and affective elements and results in direct knowing without any use of conscious reasoning”. Sinclair and Ashkanasy’s (2005) contribution is significant for two reasons: (1) they used the extant literature to build an integrative model of analytical and intuitive decision making, which combined characteristics of the
problem at hand, decision makers’ dispositions, decision context, the decision itself, and conscious analytical and nonconscious intuitive processes, with affect and gender as moderating variables; (2) they (re-)introduced a ‘supra-consciousness’ element in their discussions, suggestive of a transpersonal intuition, which they “reserved for unknown processes” (Sinclair and Ashkanasy, 2005: 360, emphasis added), thereby reprising the mystical, Jungian and spiritual perspectives that earlier writers had adopted (e.g. Vaughan, 1979 mooted a ‘spiritual intuition’).

The tenor of Sadler-Smith and Shefy (2004) was largely sympathetic towards the utility of intuitive judgement (i.e. they offered an advocacy for ‘informed’, i.e. expertise-based intuition), whilst that of Sinclair and Ashkanasy (2005) was mixed (the title of their article was ‘Intuition: Myth or a Decision-Making Tool?’). A more sceptical tone was also adopted by Miller and Ireland (2005: 21) who, although acknowledging that many executives and managers embrace intuition as a viable and sometimes effective approach, concluded that it is a “troublesome decision tool”. They distinguished between ‘holistic hunch’ (the underlying processes which are not “well understood” but is valuable when firms are emphasising exploration) and ‘automated expertise’ (recognition of familiar situations and the straight-forward but partially subconscious application of previous learning) (cf. Crossan et al, 1999).

Miller and Ireland (2005) advocated that managers should (1) exercise caution and only deploy holistic hunches when the costs of failure can be absorbed without significantly affecting a firm’s viability; (2) rely on automated expertise when exploiting existing strategies and technologies (rather than when exploring), and where constraints of time or other resources preclude raising knowledge to an explicit level. Kirton (2003: 52) has also addressed the issue of logic and intuition with respect to innovation, arguing that both adaptors and innovators need logic and intuition (e.g. “intuition can be very useful as a way of setting up a hypothesis but is unacceptable as ‘proof’”), but that they are likely to use them not only to different degrees, but in qualitatively different ways.

Although the researchers referred to above acknowledged fundamental principles underpinning current understanding of intuition as manifest in BDT, NDM and SMH, none provided a comprehensive, integrated account and testable research
propositions. The need for such a contribution was recognised by Dane and Pratt (2007: 40) who not only defined the construct in a way that has become widely accepted (i.e. “affectively charged judgements that arise through rapid, nonconscious and holistic associations”), but also provided a comprehensive review and theorisation of intuition and its role in managerial decision making. Dane and Pratt (2007) provided much-needed conceptual clarity by delineating intuition from other related constructs such as instinct and insight (cf. Hogarth, 2001), discriminated between intuiting and intuition, and developed a theoretical model and hypotheses that incorporated the role of domain knowledge, learning, task and environmental characteristics, situation awareness, and affect.

In a review of intuition research across the behavioural sciences more generally, Hodgkinson et al (2008: 19) argued that although until comparatively recently the construct has been regarded as “scientifically weak” and on the “fringes” of psychology, intuition has now emerged from the shadows to become “legitimate subject of scientific inquiry”. However, despite the many notable developments that have taken place (as summarised above) Hodgkinson et al (2008) saw considerable challenges ahead for researchers, not least the need to understand more fully the relationships between intuition’s somatic, affective, and cognitive components. Although recent years have witnessed significant advances in the integration of concepts and models from areas such as the behavioural neurosciences, dual-process theory, and NDM, there is still no fully-integrated and holistic theoretical picture of how the fundamental processes of intuiting interact within and between the physiological and psychological levels of analysis; nor, indeed, how the basic processes identified by cognitive and behavioural neuroscientists relate to specific aspects of organisational behaviour (see Hodgkinson and Healey, in press).

2.8.3 New Directions

Recent years have witnessed significant new developments in intuition research both from within management and organisation studies, and in base and previously unrelated disciplines (e.g. neuroscience and moral philosophy). In the final section of this review a number of promising new directions will be considered.
### Table 2.3 Authors and Definitions of Intuition (in alphabetical order)

<table>
<thead>
<tr>
<th>Source</th>
<th>Definition of intuition</th>
</tr>
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<tbody>
<tr>
<td>Bastick (1982: 2)</td>
<td>A powerful human faculty, perhaps the most universal natural ability we possess.</td>
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<tr>
<td>Bowers, Regehr, Balthazard and Parker (1990: 74)</td>
<td>Intuition is a perception of coherence at first not consciously represented but which comes to guide our thoughts toward a 'hunch' or hypothesis. Intuition has two stages: a guiding stage involving an implicit perception of coherence that guides thought, unconsciously toward a more explicit perception of the coherence in question. By a process of spreading activation, clues that reflect coherence activate relevant mnemonic networks, thereby producing a tacit or implicit perception of coherence. A second integrative stage, involving integrating into consciousness a plausible representation of the coherence in question; it occurs when sufficient activation has accumulated to cross a threshold of awareness.</td>
</tr>
<tr>
<td>Dane and Pratt (2007: 9)</td>
<td>The defining characteristic of intuitive processing is that: (1) It is nonconscious...it occurs outside of conscious thought. While the outcomes of intuiting, intuitive judgements are clearly accessible to conscious thinking, how one arrives at them is not. (2) As a holistically associative process it may help to integrate the disparate elements of an ill-defined problem into a coherent perception of how to proceed. For this reason intuitive judgements are said to become more effective relative to rational analysis as a problem becomes increasingly unstructured. (3) It involves a process in which environmental stimuli are matched with some deeply held nonconscious category, pattern or feature. The matching process has names including awareness, apprehension, recognition, and seeing. (4) Intuitive processing has speed when compared with rational decision making processes.</td>
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<tr>
<td>Dreyfus and Dreyfus (1986: 56)</td>
<td>Intuition is manifested in the fluent, holistic, and situation-sensitive way of dealing with the world.</td>
</tr>
<tr>
<td>Hogarth (2010: 339)</td>
<td>The essence of intuition or intuitive responses is that they are reached with little apparent effort, and typically without conscious awareness. They involve little or no conscious deliberation. Intuition is the result of learning.</td>
</tr>
<tr>
<td>Jung (1933: 567-568)</td>
<td>A psychological function that unconsciously yet meaningfully transmits perceptions, explores the unknown, and senses possibilities which may not be readily apparent.</td>
</tr>
<tr>
<td>Miller and Ireland (2005: 21)</td>
<td>Intuition can be conceptualised in two distinct ways: as holistic hunch and as automated expertise. ...Intuition as holistic hunch corresponds to judgement or choice made through a subconscious synthesis of information drawn from diverse experiences. Here, information stored in memory is subconsciously combined in complex ways to produce judgement or choice that feels right. 'Gut feeling' is often used to describe the final choice. Intuition as automated expertise is less mystical, corresponding to recognition of a familiar situation and the straightforward but partially subconscious application of previous learning related to that situation. This form of intuition develops over time as relevant experience is accumulated in a particular domain.</td>
</tr>
<tr>
<td>Author (Year)</td>
<td>Quote</td>
</tr>
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<tr>
<td>Polanyi (1964: 24)</td>
<td>Intuitions are implicitly or tacitly informed by considerations that are not consciously noticed or appreciated.</td>
</tr>
<tr>
<td>Reber (1989: 232)</td>
<td>Intuition may be the direct result of implicit, unconscious learning: through the gradual process of implicit learning, tacit implicit representations emerge that capture environmental regularities and are used in direct coping with the world (without the involvement of any introspective process). Intuition is the end product of this process of unconscious and bottom up learning, to engage in particular classes of action.</td>
</tr>
<tr>
<td>Rowan (1986: 96)</td>
<td>Intuition is knowledge gained without rational thought. It comes from some stratum of awareness just below the conscious level and is slippery and elusive. Intuition comes with a feeling of ‘almost, but not quite knowing’.</td>
</tr>
<tr>
<td>Sadler-Smith and Shefy (2004: 77)</td>
<td>Intuition is a capacity for attaining direct knowledge or understanding without the apparent intrusion of rational thought or logical inference.</td>
</tr>
<tr>
<td>Shirley and Langan-Fox (1996: 564)</td>
<td>A feeling of knowing with certitude on the basis of inadequate information and without conscious awareness of rational thinking.</td>
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<tr>
<td>Simon (1987: 63)</td>
<td>Intuition is ‘analysis frozen into habit’</td>
</tr>
<tr>
<td>Smolensky (1988: 82)</td>
<td>Intuition has the characteristics of being implicit, inaccessible and holistic. Intuition and skill are not expressible in linguistic forms and constitute a different kind of capacity, reflecting ‘sub-symbolic’ processing.</td>
</tr>
<tr>
<td>Vaughan (1979: 27-28)</td>
<td>Knowing without being able to explain how we know. Intuitive experiences have four discrete levels of awareness: physical, which is associated with bodily sensations; emotional, where intuition enters into consciousness through feelings; that is, a vague sense that one is supposed to do something and instances of immediate liking or disliking with no apparent reason; mental, which comes into awareness through images or ‘inner vision’, this is an ability to come to accurate conclusions on the basis of insufficient information; and spiritual, which is associated with mystical experience, a holistic understanding of actuality which surpasses rational ways of knowing.</td>
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<tr>
<td>Westcott (1968)</td>
<td>Intuition involves awareness of things perceived below the threshold of conscious perception.</td>
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Source: Adapted from Hodgkinson, Langan-Fox and Sadler-Smith, 2008

Dis-aggregation into Types

Historical examination of intuition research reveals the idea of intuition as non-unitary to be not new. For example, Epstein et al (1996: 403) speculated that just as mathematical, verbal, and abstract logic comprise rational processing (i.e. facets of
System 2), there may also be “several experiential [intuitive] abilities, such as visualisation, imagination, and aesthetic sensibility” (i.e. facets of System 1). Earlier still, other scholars such as Wild (1938), Vaughan (1979), and Cappon (1994) also postulated different types of intuition.

Dane and Pratt (2009) disaggregated intuitive outcomes systematically into three types based on the ‘nature of associations’, ‘intensity of affect’, and ‘level of incubation’ as follows: (1) problem-solving intuition is the outcome of a process of pattern-matching “honed through repeated training and practice” (Dane and Pratt, 2009: 5). In essence it corresponds to what Kahneman and Klein (2009) and Salas, Rosen and DiazGranados (2010) referred to as ‘intuitive expertise’. However, Dane and Pratt (2009) used the term problem-solving intuition to avoid conflating this type of intuition with one of its causes (i.e. expertise); (2) creative intuitions are “feelings that arise when knowledge is combined in novel ways” (Dane and Pratt, 2009: 5) based on loose problem structures involving integration of knowledge across different domains. However, Dane and Pratt question whether creative intuition is an intuition at all because it is relatively slow (i.e. the outcome of incubation, and hence more closely related to insight) and therefore may not warrant the descriptor ‘intuition’; and (3) the third type is moral intuition (see Hauser, 2006).

In their disaggregation of intuitive processes, Glöckner and Witteman (2010) argued that dual-process models do not provide any differentiation within the categories of intuitive or deliberative processing. They proposed a four-fold categorisation according to a series of underlying cognitive processes (i.e. associative intuition, matching intuition, accumulative intuition, constructive intuition), and argued that their taxonomy qualified some of the more ambiguous assumptions of dual-process models (e.g. that intuition operates on affective information, but it was not clear how). In Glöckner and Witteman’s (2010: 18) differentiated analysis, “affect is important as an input to as well as output from the different processes” (emphases added). This view is consistent with Slovic et al’s (2002) model of the affect heuristic (i.e. affectively-tagged images already in the affect pool are inputs to the decision process) and Dane and Pratt’s (2007: 40) definition of intuition as
"affectively charged judgements" (i.e. the affective charge is subjectively experienced as an output referred to generically as 'gut feel').

The extent to which Glöckner and Witteman’s analysis of intuitive processes maps onto related processes such as insight (see Hogarth, 2001; Jung-Beeman, Bowden, Haberman, Frymiare, Arambel-Lui, Greenblat, Reber and Kounios, 2004) or intuitive outcomes such as the creative and moral types of intuition (Dane and Pratt, 2009) is not clear (note that Glöckner and Witteman’s matching intuition shares some of the features of Klein’s RPD model, and hence is less problematic in this regard). Further research is required to explore the relationships between the disaggregated processes of intuiting (i.e. Glöckner and Witteman’s analysis) and disaggregated types of intuition (i.e. Dane and Pratt’s analysis), as well as relationships to the SMH (e.g. are somatic markers inputs or outputs in Glöckner and Witteman’s conceptualisation?) and dual-process theory more generally (e.g. how does the intensity (high/low) and valence (positive/negative) of an affective charge vary across different types of intuitive processes and outcomes?).

The Emergence of ‘Intuitive Expertise’

From the perspective of ‘intuition-as-expertise’ (Hogarth, 2001; Sadler-Smith and Shefy, 2004) informed intuition is the result of extensive and deliberate practice, reflection, feedback, and analysis (Dreyfus and Dreyfus, 1986; Ericsson, Prietula and Cokely, 2007). Hence, it is not possible to understand intuition or improve decision makers’ intuitive judgement skills in business organisations without first understanding the nature of intuitive expertise, and the conditions under which it is acquired and when it succeeds or fails (Salas et al, 2010). Kahneman and Klein (2009) mapped the boundary conditions that separate intuitive expertise from overconfident and biased judgements. Paralleling Kahneman and Klein (2009), Salas et al (2010) identified the factors that influence the use and effectiveness of intuition (i.e. level of expertise and processing styles of the decision maker; task structure and the availability of feedback; and the characteristics of the decision environment).
The recent emergence of ‘intuitive expertise’ as a distinctive topic in its own right represents the conjoining of two major traditions in intuition research, namely NDM and heuristics and biases on the basis that professional (i.e. expert) intuition is “sometimes marvellous and sometimes flawed” (Kahneman and Klein, 2009: 515). Although there are still major differences between the NDM and the heuristics and biases positions on intuition (e.g. with respect to the concept of bias) Kahneman and Klein (2009) have succeeded in bringing the insights of both traditions to bear on the analysis of intuitive judgement. In order to further advance intuition research from the expertise perspective, Salas et al (2010) have called for a programme of empirical research in field settings that tests models of individual- and team-level expertise-based intuition using methods such as think-aloud protocols, narratives, and shadowing, in order to unpack “the black box of intuition” (Salas et al, 2010: 965), as well as to longitudinally track evaluations designed to develop the intuitive expertise of individuals and teams.

2.9 Conclusion

Intuition research started with a practitioner (i.e. Barnard) initiating intuition scholarship in management and organisation studies. Over time, the significance of intuition in relation to the cognitive limitations of decision makers became apparent and moved to the fore, but the view of intuition as an attribute of humans as cognitive misers gave way to a naturalistic view of intuition as an affective, nonconscious mechanism that was both fast-and-frugal, as well as potentially powerful and perilous. With the acknowledgement of the role of affect in cognition, intuition’s place as a bridging construct was recognised. It has come to occupy an important role in the broader dual-process architecture of cognition as the latter moved centre stage in the psychological sciences in the 1990s and beyond. Part way through the story, management researchers were seduced by the lateralisation of brain function and wandered down the blind alley of hemispheric dominance. There have been recent overtures in the direction of cognitive neuroscience, and these developments are not only conceptually and theoretically coherent and compelling, they are commensurable with many of the central tenets of dual-process theory.
At the present juncture, intuition researchers have a rich and diverse set of conceptual, theoretical and methodological resources from which to draw. History shows that meaningful and long-lasting development in the study of the role of this vital aspect of human cognition in a management and organisation context cannot, because of the nature of the construct, come from within the field of management and organisation studies alone; instead scientific progress is likely to be maintained and enhanced from seeking a deeper and wider perspective which acknowledges the potential contributions of psychology, biology, and philosophy.

The above key issues will frame and guide the research undertaken in this thesis with the aim to explore the role of intuition in decision making as it pertains to organisational learning. In this respect the next chapter introduces the second stream of research reviewed in this thesis and focuses on decision making in management teams.
3.0 Introduction

Since Hambrick and Mason’s (1984) upper echelons model of organisations, an extensive literature has developed in the field of strategic decision making (Bantel and Jackson, 1989; Finkelstein and Hambrick, 1990; Keck and Tushman, 1993; Hambrick, 1995; Jackson, 1992; Carpenter, 2002; Kauer et al, 2007). Given the limited view of the upper echelon theory, for the past few decades researchers have focused their interest on the interactions within the top management teams to explore strategic decision making effectiveness (Edmondson, Roberto and Watkins, 2003; Roberto, 2003; Eisenhardt and Bourgeois, 1988; Eisenhardt, 1989, 1990; Eisenhardt, Kahwajy and Bourgeois, 1997). In recent years, in search of deeper-level characteristics of the top managers (e.g. personality), research has ultimately led to the investigation of the cognitive processes in top management team decision making (Olson, Parayitam and Bao, 2007; West, 2007; Gibson, 2001; Leonard, Beauvais and Scholl, 2005; see Hodgkinson and Healey, 2008).

In this chapter, decision making is discussed as a team process from a collective perspective. The TMT is the community of interest because of their seniority and breadth of experiences, it is presumed that these managers should possess more tacit knowledge than others in the rest of the organisation. The chapter starts with the conceptualisation of TMTs and follows with three important aspects of the TMT research: team composition; dynamics of the decision making processes; and cognitive perspectives of TMT decision making.

3.1 Conceptualising Top Management Teams: A Multi-Perspective Approach

The senior management coalition, widely referred to as the ‘top management team’, plays a central and critical role in formulating and executing corporate decisions and transformations (Klenke, 2003). The term ‘top management team’ entered the academic literature in the 1980s and is now an expression widely used by both
scholars and executives. This focus on top teams represents an important advance in thinking about executive leadership, since the management of an enterprise is typically a shared activity, extending well beyond the chief executive. Hambrick (1995: 111) stated that to some, the term top management team implies a formalised management-by-committee or co-executive arrangement such as “the office of the CEO”; also called the ‘dominant coalition’ which constitutes the organisation’s power elite (Cyert and March, 1963). Most commonly it refers simply to the relatively small group of most influential executives at the apex of an organisation (Hambrick, 1995) which acts as a strategic decision making unit for the organisation (Bantel and Jackson, 1989). Hambrick and Mason (1984: 194) defined “strategic” decisions as complex and of major significance to the organisation which represent the most important responsibility of the senior management (Harrison and Pelletier, 1998).

Cyert and March (1963) theorised that the dominant coalition of managers set organisational goals, and the values of this group shape organisational behaviours. According to Child (1972), the concept of dominant coalition draws attention to the view of organisations in relation to the distribution of power and the process of strategic decision making. He suggested that it is primarily to distinguish between those who have the power to take the initiative on matters such as the design of organisational structure, from others who are in a position of having to respond to such decisions.

The effectiveness of the entire organisation is generally attributed to the effectiveness of the strategic decisions made by its senior executives (Harrison and Pelletier, 1998). Therefore, top teams are considered a significant organisational tool to make decisions with important consequences (Salas and Fiore, 2004). Orasanu (1990) suggested the notion that teams ‘think’ implying that they possess knowledge that allows them to function effectively as a team, as a result they can make better decisions and can be more productive than individuals, which make teams a popular configuration in organisations (Cooke, Salas, Kiekel and Bell, 2004).
According to Hambrick, Nadler and Tushman (1998) the TMT is not simply an aggregation of individual executives, rather the dynamics and complementarities that exist within the team greatly influence corporate outcomes, determine corporate governance, and are instrumental in achieving corporate coherence or unity of purpose and action. Many scholars contend that successful organisational performance requires efficient decision making and effective implementation (Bourgeois and Eisenhardt, 1988; Janis, 1989). This suggests that the decision making process unfolds smoothly, managers select a course of action in a timely manner (Eisenhardt, 1989), and that managers carry out the selected course of action and meet the objectives established during the decision process (Andrews, 1987).

Mintzberg, Raisinghani and Theoret (1976) proposed that the top team can be considered as the aggregate informational and decisional entity through which competitive moves are made. These moves depend on the team’s scanning of the environment, recognising problems and opportunities, and interpreting other external stimuli, developing potential moves, negotiating, refining and selecting moves, and implementing decisions.

Edmondson et al (2003) suggested that encouraging the CEO and senior executives to work as a team is a way of enhancing strategic leadership effectiveness in complex organisations. Teamwork allows the CEO to engage in a participative group process through which diverse members confront difficult issues to make decisions and build commitment to implementing them, with the aim of leading improved strategic leadership effectiveness.

Despite the potential effectiveness of TMTs, considerable research and anecdotal evidence suggest that they often fail to achieve their potential. Some scholars have found that many senior teams do not engage in real teamwork (Hackman, 1990). Others have reported that TMTs can find it difficult to resolve conflict (Amason, 1996), build commitment (Wooldridge and Floyd, 1990), or reach closure in a timely fashion (Eisenhardt, 1989). Several in-depth case studies showed how dysfunctional group dynamics can lead to errors in judgement and flawed decisions. For example, Janis’ (1982) work on groupthink attributed certain foreign policy failures to the
pressures for conformity that arise within cohesive senior groups. In addition, Ross and Staw (1986, 1993) examined how groups of senior executives escalate commitment to failing courses of action. According to Edmondson et al (2003), these leadership failures can be explained by an inability to manage group processes effectively, reducing decision quality and overall team effectiveness.

3.2 Top Management Team Composition

Research on TMTs goes back to a milestone article by Hambrick and Mason (1984); the acknowledgement of the importance of groups in decision making has led to a stream of research termed ‘organisational demographics’. Numerous studies over the last two decades examined the demographic factors influencing TMTs’ decision making and found significant associations between the demographic composition of the team and firm performance (e.g. Hambrick, Cho and Chen, 1996; Jackson, 1992; Carpenter, 2002; Bantel and Jackson, 1989; Finkelstein and Hambrick, 1990; Keck and Tushman, 1993; Papadakis and Barwise, 2002; Kauer et al, 2007; Michel and Hambrick, 1992). The foundations of this research is established by Hambrick and Mason’s (1984) ‘upper echelons’ model of organisations which proposes that personal characteristics of senior managers ultimately determine their strategic decision choices.

3.2.1 Upper Echelons Model

In Hambrick and Mason’s (1984) upper echelons model, organisational outcomes – strategic choices and performance levels – are viewed as reflections of the values and cognitive bases of powerful actors in the organisation. This theory argues that organisational outcomes can be partially predicted by managerial background characteristics from executives’ experiences, values, and personalities which influence their interpretations of the situations they face and which in turn affect their choices (Hambrick and Mason, 1982, 1984; Hambrick, 2007; Kauer et al, 2007; Carpenter, Geletkanycz and Sanders, 2004). Hambrick and Mason (1984) argued that if strategic choices have a large behavioural component, then to some extent they reflect the idiosyncrasies of the decision makers. The authors used the term ‘strategic
choice' as theorised by Child (1972), to refer to choices generally associated with strategy; made formally and informally, indecision as well as decision, and major administrative choices (e.g. reward systems and structure).

As March and Simon (1958) argued each decision maker brings his/her own set of ‘givens’ to an administrative situation. These givens reflect the decision maker’s values (i.e. principles for ordering consequences or alternatives according to preference) and the cognitive base in terms of knowledge or assumptions about future events, knowledge of alternatives, and knowledge of consequences attached to alternatives. In the upper echelons theory, values are treated as something that on the one hand can affect perceptions, but on the other hand can directly enter into a strategic choice; because theoretically a decision maker can arrive at a set of perceptions that suggest a certain choice, but discard that choice on the basis of values. As a result, the decision maker brings cognitive base and values to a decision, which create a screen between the situation and his/her eventual perception of it. Consequently, it is the combination of the manager’s perception of the situation with his/her own values which influences the manager’s decision making (Hambrick and Mason, 1984).

Hambrick and Mason (1982) explained that the values and perceptions are created by a host of factors, including aspects of managers’ backgrounds that may be useful for predicting organisational outcomes. However, since the cognitions, values, and perceptions of upper level managers are difficult to measure, the primary emphasis of the upper echelons theory is placed on observable managerial characteristics as indicators of the givens that a manager brings to an administrative situation. Examples of such characteristics are age, tenure in the organisation, functional background, education, socioeconomic roots, and financial position (Hambrick and Mason, 1982, 1984).

In the literature there is consensus that the CEO is the most powerful member of the TMT (Peterson, Smith, Martorana and Owens, 2003) and the previous research on linkages between top managers and the strategies they pursue has almost entirely focused on the CEO (Hambrick and Mason, 1982). However, at a more practical
level, the CEO shares power and tasks with the TMT who are involved in the decision making process. Upper echelons studies typically emphasise the efforts of the entire team, and not a single person, based on the belief that teams are essential to “the specialised work of maintaining the organisation in operation” (Barnard, 1938: 215). Hambrick (2007) asserted that a focus on the characteristics of the TMT will yield stronger explanations of organisational outcomes than will the customary focus on the individual top executive (e.g. CEO) alone. The original upper echelons model is shown in Figure 3.1.

The left-hand side of Hambrick and Mason’s original model shows the organisation’s internal and external situation. Upper echelon characteristics such as age, functional background, and educational experiences are next taken as observable proxies for the psychological constructs that shape the team’s interpretation of the internal and external situation and facilitate formulation of appropriate strategic alternatives. The prominent role of psychological constructs such as values and perceptions are attributed to executives’ bounded rationality (see Chapter 2).

In other words, faced with such common decision challenges as information overload, ambiguous cues, competing goals and objectives, executives’ perceptions of stimuli are filtered and interpreted through cognitive bases and values. Since these psychological constructs are unobservable, the theory points that observable managerial characteristics are efficient proxies that provide reliable indicators of the unobservable psychological constructs. What is more, managers are expected to economise on these efforts by working collectively as a team. In turn, Hambrick and Mason (1984) proposed that demography’s impact on cognitive processes will subsequently be revealed in strategic outcomes. Thus, the third box reports a range of strategic variables, from innovation to response time, expected to reflect executive team characteristics. Finally, Hambrick and Mason’s model predicts that the resultant organisational performance, gauged along a number of dimensions from profitability to the firm’s basic survival, will ultimately be impacted (Carpenter et al, 2004).
Figure 3.1 Upper Echelons Model of Organisations

Source: Hambrick and Mason, 1984
To summarise, the three central tenets of the upper echelons perspective are that: strategic choices made in firms are reflections of the values and cognitive bases of powerful actors; the values and cognitive bases of such actors are a function of their observable characteristics such as education or work experience; and as a result significant organisational outcomes will be associated with the observable characteristics of those actors. These three central tenets inform the upper echelons theory which proposes that an organisation and its performance will be a reflection of the composition of its TMT.

3.2.2 Critique of Upper Echelons Model

A criticism of the upper echelons research came from Edmondson et al (2003) who asserted that by relying on relatively stable and deterministic causal models, the upper echelons research ignores the ways team processes and outcomes might vary across multiple situations faced by senior teams. The authors argued that this work assumes a consistency of conditions and team performance that is unlikely to exist in real TMTs. Accordingly, Edmondson et al (2003) concluded that demographic analysis, as proposed in the upper echelons research, underspecifies the role of process and provides an incomplete explanation of variations in a team’s performance over time.

In this respect, Roberto (2003: 123) argued that membership in the firm’s dominant coalition is rather fluid, typically consisting of a “stable core group” combined with a “dynamic periphery”, i.e. a changing set of individuals who work together closely with the core group to address particular strategic challenges. This finding suggested that multiple ad hoc groups form over time to address specific issues, different members of the TMT become involved in each decision, whilst a few members participate in all processes.

Roberto (2003) found three major factors that appeared to influence the composition of the decision making groups: expertise, personal relationships, and expected implementation responsibility. Since each of these factors tended to differ in any given situation, different groups of managers came together to make each decision.
The composition of these groups, in turn, shaped the decision process. According to Roberto (2003), people became involved if they possessed relevant expertise. People's job titles and functional responsibilities did not necessarily dictate whether they became involved, instead involvement depended on how their expertise matched the specific issues that warranted attention. People also became involved based upon their personal relationships with others already participating in the decision process. Personal relationships sometimes affected group composition in a different way. At times, executives attempted to avoid stimulating interpersonal conflict. Finally, an individual's expected impact on implementation success also influenced whether they became involved. If managers knew that someone would play a critical implementation role, they often solicited that person's advice to insure effective execution.

Furthermore, according to Roberto (2003), strategic decision processes do not take place strictly at the highest levels of the organisation. Managers from lower levels may surface strategic issues, bring them to the attention of the TMT, and play a major role in strategic choices. Therefore, an individual's position in the organisation structure does not determine his/her role in the decision process, instead people's roles vary by situation.

Another criticism for the upper echelons theory came from Kauer et al (2007). The authors stated that while demography based research has the advantage that the data is objective, easily accessible and more reliable (Priem, Lyon and Dess, 1999), it also has two major drawbacks: it makes assumptions as to how demographics reflect deeper-level factors such as personalities, attitudes and cognitive characteristics (Pitcher and Smith, 2001), and it ignores or makes assumptions about mediating cognitive or organisational processes (Priem et al, 1999). Only rarely have the mediating processes (e.g. information sharing, interpreting or problem solving) been integrated into the research; how they affect outcomes and what the underlying causal relationships are has remained widely unexplored (Carpenter et al, 2004; Papadakis and Barwise, 2002).
In this respect, Kauer et al’s (2007) study suggested that the interaction of the top managers during strategic decision making appeared to be related to deeper-level characteristics, that is personality variables such as flexibility, achievement motivation, networking abilities and action orientation, which help them to interact well with each other and explore the potential offered by their diversity of experience.

The next section moves the discussion from team demographics to team interactions in order to explore the dynamics of the TMT decision making processes.

3.3 Dynamics of TMT Decision Making Processes

When decisions are made in a group setting they are likely to be influenced by social interaction among the various members of the decision making team. In this respect, scholars have recently recommended that TMT decision making research should stretch beyond demography and place more emphasis on group processes to understand the ‘whys’ and ‘hows’ of effective strategic decision making (Carpenter et al, 2004). The dynamics of group decision making processes have been analysed by various researchers with a particular focus on comprehensiveness (Simons, Pelled and Smith, 1999), political behaviour in TMTs (Eisenhardt and Bourgeois, 1988), and speed in the strategic decision making process (Eisenhardt, 1989). In this section previous research on group interactions and behaviours relating to decision making processes is reviewed.

3.3.1 Politics of Strategic Decision Making

Many scholars found that political activity plays a critical role in organisational decision making processes (Bower, 1970; Eisenhardt and Bourgeois, 1988; Pettigrew, 1973; Pfeffer, 1992). These authors have shown that managers engage in political behaviour to build support within the firm for their proposals.

According to Allison (1971), most strategic decision processes are ultimately political in that they involve decisions with uncertain outcomes, actors with
conflicting views, and resolution through the exercise of power. Politics are the observable but often covert actions by which executives enhance their power to influence a decision (Eisenhardt and Zbaracki, 1992). Various researchers argued that decisions follow the desires and subsequent choices of the most powerful people (March, 1962; Salancik and Pfeffer, 1974). Accordingly, decision makers often attempt to change the power structure by engaging in political tactics such as coalition formation, lobbying, cooptation, strategic use of information, withholding agendas, and the employment of outside experts (Pettigrew, 1973; Pfeffer, 1981, 1992; Eisenhardt and Bourgeois, 1988). However, since all interest groups may be engaging in similar behaviour, the decision making process may be characterised by various forms of bargaining, negotiation and compromise that may lead to outcomes which are less than optimum for all parties (Miller et al, 1999). Nevertheless, the traditional view is that politics are essential to organisations such that creating effective change and adaptation within organisations depend upon effective use of politics (Quinn, 1980; Pfeffer, 1981, 1992).

**Power**

Decisions can be viewed as being fundamentally concerned with the allocation and exercise of power in organisations (Miller et al, 1999). Many authors argued that politics arise when power is decentralised (Hage, 1980; Pfeffer, 1981). According to these authors, domination by powerful CEOs combined with the desire for control by TMTs leads to political behaviour in the organisations. When the power of individual actors is roughly equivalent, individuals band together to influence decision processes; conversely, when power is highly centralised, conflict is submerged and the use of politics declines (Pfeffer, 1981).

Contrary to the claims stated above, in a study of politics in eight firms in the microcomputer industry, Eisenhardt and Bourgeois (1988) found specifically that politics tended to emerge when power was centralised. The more powerful a CEO, the greater the tendency among remaining executives to consolidate power and engage in alliance and insurgency behaviours, while the CEO engaged in tactics for controlling and withholding information. Where power was centralised, the authors...
found competition among executives. On the other hand, where power was relatively decentralised these researchers found that the team maintained a collaborative viewpoint and engaged in cooperative behaviour focusing on group rather than individual goals.

Bachrach and Baratz (1962) talked about the ‘two faces’ of power and looked beyond what is readily observable in organisations. As such, the authors argued that one way managers impose power is when conflict is kept quiet and not allowed to surface into open debate so that it does not become an item for discussion. This means that some decisions do not get onto the agenda as they are usually controversial topics which go against the interests of powerful stakeholders. Therefore, they are not considered acceptable for discussion and are quietly side-stepped, suppressed or dropped.

Conflict

The view that organisations are political systems of conflicting preferences has been supported by several case studies (Allison, 1971; Baldridge, 1971; Pettigrew, 1973, 1985; Quinn, 1980; Eisenhardt and Bourgeois, 1989). Eisenhardt et al (1992) suggested that in the political model, people are viewed as individually rational but not collectively so. The key assumption is that organisations are coalitions of people with competing interests. While these individuals may share some goals such as the welfare of the organisation, they also have conflicts. On one side conflict can improve decision quality, uncover flawed assumptions, and improve the understanding of a decision’s rationale; on the other side it can slow the decision process, undermine satisfaction, and hinder open interaction (Schweiger, Sandberg and Ragan, 1986).

Eisenhardt et al (1997) emphasised the importance of conflict in TMTs. The authors asserted that management teams whose members challenge one another’s thinking develop a more complete understanding of the choices, create a richer range of options, and ultimately make effective decisions. The challenge, however, is to keep constructive conflict over issues from degenerating into dysfunctional interpersonal
conflict, to encourage managers to argue without destroying their ability to work as a team.

Talaulicar, Grundei and van Werder (2005) argued that diverse knowledge of the team members must be articulated and discussed within the group to result in high-quality decisions. Hence, cognitive conflicts and open debate are important processes that serve as moderators of the relationship. Both soliciting and providing information are more likely to take place if the executives trust each other.

Amason and colleagues (Amason, 1996; Amason and Mooney, 1999) suggested that cognitive conflict is functional because it is task oriented and focused on members discussing and challenging each other's diverse perspectives. On the other hand, affective conflict is dysfunctional as it is more emotional and focused on debating issues peripheral to the decision context. It is likely that what starts as cognitive conflict may often spiral into affective conflict. Teams that experience higher behavioural integration (i.e. the extent to which the TMT engages in mutual and collective interaction) (Hambrick, 1994, 1998) make better decisions and achieve higher levels of performance. As a result, behavioural integration encourages teams to manage conflict effectively by engaging in cognitive conflict and avoiding affective conflict.

**Formation of Alliances**

Political activity has often been described as organised into temporary and shifting alliances (Bachrach and Lawler, 1980; Gamson, 1961; March, 1962). The argument is that individuals form alliances around common points of view on a given issue in order to enhance their influence on the decision, and the alliances disband when the issue is resolved. In addition, Pfeffer (1981) asserted that individuals try to make these alliances as large as possible in order to smooth implementation.

In contrast to this argument, findings of the study by Eisenhardt and Bourgeois (1988) suggested that politically active TMTs were likely to be organised into stable alliance patterns and executives did not shift allies as issues changed. Rather, they
developed stable coalitions with one or possibly two other executives, and they routinely sought out alliances with the same people. Accordingly, when usual allies disagree on an issue, they generally do not seek out more favourably disposed executives; rather they either drop the issue or pursue their interests alone (Eisenhardt and Bourgeois, 1988).

Additionally, Eisenhardt and Bourgeois (1988) found evidence that coalitions developed on the basis of demographic factors such as age, office location, similarity of titles, and prior experience together. One explanation might be that people choose to ally with those with whom they interact frequently and with whom they feel comfortable (Eisenhardt and Bourgeois, 1988). This evidence is consistent with the upper echelon view (Hambrick and Mason, 1984) that demographics can play an important role in the functioning of TMTs.

The finding that alliances are not particularly issue-based is consistent with the views that most people are not comfortable with politics (Gandz and Murray, 1980), that they use politics only when they think that they must, and that when they do use politics they try to engage in safe, familiar allies. Overall, the findings from the Eisenhardt and Bourgeois (1988) study give further credence to the existence of a social, rather than an ideological, basis of alliance formation.

3.3.2 Fast and Effective Decision Making

Research by Eisenhardt (1989) explored how managers make fast, yet high-quality strategic decisions in high-velocity environments. By high velocity, Bourgeois and Eisenhardt (1988) meant those environments in which there is rapid and discontinuous change in demand, competitors, technology and/or regulation, such that information is often inaccurate, unavailable, or obsolete. Such environments are particularly challenging because information is poor, mistakes are costly, and recovery from missed opportunities are difficult.

The results of Eisenhardt’s (1989) study link fast decisions to several factors including the use of real-time information, multiple alternatives, counselors, conflict
resolution, and decision integration. The research findings provided evidence that fast decision makers use more, not less, information than slow decision makers. The former also develop more, not fewer, alternatives and use a two-tiered advice process. Eisenhardt (1989) found that conflict resolution and integration among strategic decisions and tactical plans are also critical to the pace of decision making. These findings are discussed below in detail.

**Information Processing**

In the literature, there are several perspectives on how rapid strategic decisions are made. One research stream emphasises the idea that a high level of comprehensiveness (i.e. the extent to which organisations attempt to be exhaustive or inclusive in the making or integrating of decisions) slows the strategic decision process (Fredrickson and Mitchell, 1984; Fredrickson, 1984). According to this perspective, consideration of few alternatives, obtaining input from few sources, and limited analysis lead to quick decisions (Mintzberg, 1973; Nutt, 1976; Janis, 1982). This perspective implies that the greater the use of information, the slower the strategic decision process. Within the notion of comprehensiveness, it is important to acknowledge that decision makers in organisations have cognitive limits i.e. they are boundedly rational (March and Simon, 1958), and that decision makers satisfice instead of optimise. Talaulicar et al (2005) found that TMT processes, namely debate and trust, significantly influenced the comprehensiveness and speed of strategic decision making in start-ups.

Contrary to this argument, the findings from Eisenhardt’s (1989) research indicated that executive teams making fast decisions used extensive information – often more information than the slower decision makers used. However, there was a crucial difference in the kind of information used (Eisenhardt, 1990). Slow decision makers relied on planning and forecasting information. They spent time tracking the likely path of technologies, markets, or competitor actions, and then developed plans. In contrast, the fast decision makers looked to real-time information, that is, information about current operations and current environment which is reported with little or no time lag.
Eisenhardt (1989, 1990) argued that there are several reasons why the use of real-time information speeds the pace of the strategic decision process. One reason is that such information speeds issue identification, allowing executives to spot problems and opportunities sooner (Dutton and Jackson, 1988). Real-time information acts as an early warning system so that managers can respond before situations become too problematic. Secondly, Simon (1987) indicated that intuition relies on patterns developed through continued exposure to actual situations hence building up the experience base of the decision maker. Consistent with this view, Eisenhardt (1990) asserted that executives who track real-time information are actually developing their intuition. Aided by intuition, they recognise patterns and can react quickly and accurately to changing events in their organisation and its environment. Eisenhardt (1989) stated that executives who relied most heavily on real-time information were also most frequently described as being intuitive. Finally, constant attention to real-time information may allow executive teams to gain experience in responding as a group. The frequent review of real-time information may develop the social routines people need to respond quickly when pressing situations arise (Eisenhardt, 1989).

Similarly, Brockmann and Anthony (2002) stated that faster and higher quality decisions are made when managers rely on their intuition. The authors argued that if intuition is used within the team, managers would have a larger inventory of tacit knowledge to select from which would lead to even faster and higher quality decisions. Brockmann and Anthony (2002) stated that tacit knowledge may be the element missing in explaining, at least partially, how some strategic decisions work out even though they may not appear rational at the time they were made. For instance, a decision considered non-rational because it lacked information might simply have been an application of tacit knowledge to fill the gaps. Thus, by recognising the potential influence of tacit knowledge, the effect of decisions on the organisation may be better explained.

**Multiple Alternatives**

Various researchers noted that multiple alternatives are likely to slow the strategic decision process (Fredrickson and Mitchell, 1984; Janis, 1982; Vroom and Yetton,
The underlying logic was that fewer alternatives are faster to analyse than more. In contrast, Eisenhardt’s (1989) findings suggested that faster decision making was associated with more, not fewer, alternatives. Moreover, the sequencing of alternatives was crucial to the pace, often working several options at once.

Eisenhardt’s (1989) study revealed that there appears to be a fundamental difference in how fast and slow decision makers treat alternatives. Fast decision makers develop multiple alternatives, but analyse them rapidly. They rely primarily on quick, comparative analysis which reveal relative rankings and sharpen preferences. Their’s is a “breadth-not-depth” strategy (Eisenhardt, 1990: 47). On the contrary, slow decision makers emphasise depth of analysis. They analyse few alternatives, but do so in greater depth, and without gaining the confidence in their choice that multiple alternatives bring and without gaining the advantage of fallback positions.

According to Roberto (2004), for organisations to perform well, managers must make high-quality decisions in an efficient manner and simultaneously build consensus to facilitate implementation. The author found that groups attained greater efficiency and consensus if they made a series of small but critical choices during the process, rather than focusing entirely on the final selection of a course of action. These choices concerned the decision criteria, the elimination of options over time and the specific events on which the final choice was contingent. Accordingly, managers established well-defined criteria prior to debating alternatives and demonstrated that this approach typically resulted in greater efficiency and consensus. This ensured comparisons of alternatives and helped to surface underlying causes of disagreement. High efficiency/high consensus groups did not try to choose directly from the entire set of options. Instead they identified many alternatives and formed subgroups of similar options. Then they eliminated one or more subsets of options and proceeded to evaluate the remaining alternatives. This process made the evaluation of options more transparent thereby enhancing the understanding of the decision within the team and leading to effective decision making.
Role of Advisers

Eisenhardt’s (1989) findings showed that teams making faster decisions had a two-tier advice process. Their CEOs sought counsel from all members of the top management team, but they focused on obtaining advice from one or two of the firm’s most experienced executives, whom Eisenhardt (1989: 559) termed “counselors”. Typically, counselors work in the background advising the key decision maker about a wide range of issues. On the other hand, CEOs whose teams made slow decisions either had no counselor or had a less experienced executive in the counselor role. Eisenhardt (1989) found that the counselor hastens the development of alternatives, providing a readily available sounding board for ideas and relating the decision to past experience. In addition, experienced counselors are likely to provide useful, high-quality advice more readily than less experienced colleagues.

Conflict Resolution

Several authors (Hickson, Butler, Cray, Mallory and Wilson, 1986; Mintzberg et al, 1976) argued that conflict influences the length of a decision process. For example, Mintzberg and his colleagues (1976) found that conflict created interruptions in the process such that increasing conflict slows the pace of strategic decisions. Although conflict can have this effect, Eisenhardt (1990) stated that fast decision makers know how to gain the advantages of conflict without extensive delays in their decision process through conflict resolution.

According to Eisenhardt’s (1989) findings, the approach to conflict used by fast decision makers contrasts markedly with that used by the slow decision makers. Fast teams take a realistic view of conflict and actively deal with it. They see it as natural, valuable, and almost always inevitable. Fast decision makers typically use a two step process, termed ‘consensus with qualification’ to resolve deadlocks among individuals. Eisenhardt’s (1989) study showed that, first, executives talk over an issue and attempt to gain consensus. If consensus occurs, the choice is made. However, if consensus is not forthcoming, the key manager makes the choice guided
by the input from the rest of the group. Therefore, fast decision makers recognise that choices must be made even if there is disagreement. On the contrary, slow decision makers wait for consensus as they look for an option which satisfies everyone. However, since conflict is common in decision making, the search for consensus often drags on for months delaying the decision until external events force a choice.

**Decision Integration**

Evidence from Eisenhardt’s (1989) study indicated that fast teams attempted to integrate strategic decisions with one another and with tactical plans, whereas the teams making slower decisions treated decisions as discrete and even disconnected events with little concern for how decisions related to each other or to tactical plans.

Accordingly, decision integration helps executives to analyse the viability of an alternative and potential conflicts with other decisions more quickly, hence limiting discontinuities between decisions. In contrast, slow decision makers treat each decision as a separate event, detached from other major choices and from tactics of implementation. In effect, they employ a linear view of decision making. Overall, slow decision makers see decisions as very large, discrete, and anxiety-provoking events whereas fast decision makers see individual decisions as a smaller part of an overarching pattern of choices (Eisenhardt, 1990).

### 3.3.3 Group Heterogeneity

Also of relevance is the amount of dispersion, or heterogeneity, within a managerial group. Hoffman and Maier (1961) proposed that diversity enhances the breadth of perspective, cognitive resources, and overall problem-solving capacity of the group. According to their view, with multifaceted backgrounds and orientations, members of a diverse team can observe more opportunities, threats and overall stimuli on multiple fronts and thus have a broader potential repertoire for generating actions. However, at the same time, because of diversity, a heterogeneous team may experience internal conflict, which could hinder the group’s ability to function and
make effective decisions (McCain, O'Reilly and Pfeffer, 1983; Wagner, Pfeffer and O'Reilly, 1984).

Janis (1972) argued that homogeneity, as manifested in cohesiveness and insularity, leads to inferior decision making. In his view, homogeneity is one of several conditions that bring on groupthink, which amounts to restricted generation and assessment of alternatives. Filley, House and Kerr (1976) found that routine problem solving is best handled by a homogeneous group, and that ill-defined, novel problem solving is best handled by a heterogeneous group in which diversity of opinion, knowledge, and background allows a thorough airing of alternatives. Similarly, Hambrick and Mason (1984) stated that heterogeneity yields benefits in turbulent environments whereas homogeneity is beneficial in stable environments. However, Carpenter's (2002) findings suggested that heterogeneity had a positive relationship with performance at low levels of complexity, but exhibited a negative relationship at high levels of complexity. These results stand in contrast to previous views of heterogeneity which argue that TMT diversity will serve firms best when they face great complexity.

In addition to the conflicting arguments above, research on TMT demography has produced further mixed results regarding group heterogeneity. Some studies reported positive effects of homogeneity such as better team communication (Zenger and Lawrence, 1989), faster decision implementation (O'Reilly and Flatt, 1989), and better financial performance (Smith, Smith, Sims, O'Bannon and Scully, 1994). Other researchers, however, have obtained results that indicated that heterogeneity at the top leads to greater creativity and innovation (Bantel and Jackson, 1989) and a diversity of perspectives resulting in higher decision qualities (Eisenhardt and Schoonhoven, 1990). Several authors (e.g. O'Bannon and Gupta, 1992) suggested that both homogeneity and heterogeneity may coexist in TMTs. More specifically, these authors argued that creativity and decision making will be enhanced through the heterogeneity of diverse backgrounds, while at the same time social cohesion which fosters similarity of attitudes and values results from the homogeneity at the top. Similarly, Jackson (1992) reported that heterogeneity is important in decision making conferring breadth of perspective on the one hand, and the potential for team
dissent and inefficiency on the other. Accordingly, while heterogeneity improves decision quality, it can also make implementation more difficult – hence it is viewed as a double-edged sword.

3.4 A Cognitive Approach to Decision Making in Teams

The roots of the cognitive perspective in strategic management and strategic decision making go back to the work of Simon on bounded rationality (March and Simon, 1958). Cognitive perspective is concerned with the way executives conceptualise strategic problems, the way they develop their own rules and guidelines, the personal and organisational characteristics that influence this process, and the ways these rules influence their own decision making (Schwenk, 1995).

Research into cognitive processes in TMTs has advanced considerably over recent years (see Hodgkinson and Healey, 2008) and various researchers examined the cognitive processes within decision making by TMTs (Olson et al, 2007; West, 2007). Rajagopalan, Rasheed and Datta (1993) suggested that cognitive psychological theories of decision making (e.g. Kahneman and Tversky, 1984) and theories of group decision making (e.g. Gladstein and O'Reilly, 1985) might contribute to a better understanding of the strategic decision processes used by TMTs.

3.4.1 Individual Differences

Consistent individual differences in information processing have been referred to as “cognitive style” (Messick, 1984: 5). Cognitive style characterises the way individuals arrive at judgements or conclusions based on their observations (Hunt, Krzystofiq, Meindl and Yousry, 1989). According to Messick (1984), cognitive style is concerned with what an individual will do in a given type of situation. The main contribution of the cognitive style construct lies in its ability to bring together notions of information processing theory and personality (Hayes and Allinson, 1994; Sternberg and Grigorenko, 1997; Riding and Rayner, 1998). It has been used to study decision making behaviour, conflict, strategy development, and group processes.
Clarke and Mackaness (2001) asserted that individual differences in perception occur principally because managers: (1) take 'bounded' views of problems (March and Simon, 1958); (2) search for and select information in different ways; and (3) have contrasting 'cognitive styles' (Allinson and Hayes, 1996). This view is central to Schwenk’s (1984) perspective of strategic decision making which integrated previous models developed from organisational, political, and cognitive perspectives. The organisational view implies that structures and processes influence information flows; the political perspective highlights the interplay between external influences and internal political manoeuvring, and power struggles within the group; and the cognitive perspective emphasises the effect of how problems are comprehended. Central to all three models is the way in which individuals within the group perceive the decision environment and exert their cognitive biases and assumptions.

Hodgkinson and Healey (2008) stated that individual differences in information processing preferences represent a broad class of cognitively based variables that have been adopted widely in the analysis of organisational behaviour, reflecting in general terms the distinction between analytic and intuitive processing (Chaiken and Trope, 1999, see Chapter 2). One view maintains that analysis and intuition are served by a common underlying cognitive system that individuals have a stable overarching preference for one approach or the other, and that these tendencies are organised along a unidimensional, bipolar continuum (see Allinson, Armstrong and Hayes, 2001; Hayes, Allinson, Hudson and Keasey, 2003). In contrast, a second perspective accords greater agency to individuals, arguing that analytic and intuitive processing capabilities are served by independent cognitive systems that permit individuals to switch back and forth from one approach to the other as required (a process referred to as ‘switching cognitive gears’) albeit moderated to some extent by stylistic preferences (see Dane and Pratt, 2007; Hodgkinson and Sadler-Smith, 2003a, 2003b).

According to Hayes and Allinson (1998), cognitive style influences the way managers scan the environment for new information, organise and interpret this information, and incorporate their interpretations into the mental models that guide their actions. On the basis of their review of the cognitive styles literature, Hayes and
Allinson (1994) concluded that a single, overarching dimension underpins the various facets of cognitive style which they refer to as ‘the analysis-intuition dimension’. The ‘intuition’ pole is used to describe what is often called ‘right-brain’ thinking (i.e. immediate judgements based on feeling and the adoption of a global perspective), while the ‘analysis’ pole is used to describe ‘left-brain’ thinking (i.e. judgements based on mental reasoning and a focus on detail) (Allinson and Hayes, 1996: 122) (see Chapter 2 for the discussion on ‘split-brain’ research).

Drawing on dual-process theories from cognitive psychology and social cognition, Hodgkinson and Clarke (2007) outlined a two-dimensional framework to demonstrate the impact of individual differences in cognitive style on the observed behaviours of strategy makers (see Figure 3.2). The authors suggested that these individuals would, cognitively speaking, fall into one of four broad types, depending upon the degree to which they are characterised by a marked preference for an analytical and/or intuitive approach to the processing of information.

**Figure 3.2 Individual Differences in Cognitive Style**

![Diagram showing the two-dimensional framework of individual differences in cognitive style.]

Source: Hodgkinson and Clarke, 2007
Individuals falling within the first category are characterised as the 'detail conscious' (highly analytic with little or no regard for intuition). A considerable volume of research (see Hayes and Allinson, 1994) suggests that individuals dominated by an analytic cognitive style have a tendency to approach problems in a step-by-step, systematic fashion. However, a potential problem facing such individuals is that when confronted with an abundance of information, particularly under time pressure (Klein, 1998), they might become overburdened to the extent that they experience difficulty in extracting the bigger picture from the detail, the state of affairs identified by Langley (1995) as 'paralysis by analysis'.

The second category is the 'big picture conscious' individual (highly intuitive with little or no regard for analytic approaches to problem solving and decision making). A major strength of intuitive approaches is that they gain an overview of the problem quickly but at the expense of the detail. Such individuals might overlook salient data seen by their counterparts with more highly developed analytical capabilities (Clarke and Mackaness, 2001) leading to ill-conceived, arbitrary decisions, the state of affairs identified by Langley (1995) as 'extinction by instinct'.

Individuals characterised neither by particularly strong analytical nor intuitive inclinations constitute the third category within this framework called 'non-discriminating'. These individuals lack discernment in the sense that they deploy minimal cognitive resources in order to derive strategic insight, being disinclined to process the detail or to extract a bigger picture from such detail. It is possible that such individuals rely on the opinion and received wisdom of others, thus relieving themselves of the burdens of analytic and intuitive processing altogether.

Individuals falling within the fourth category, the 'cognitively versatile' (highly analytic and highly intuitive), possess in equal abundance the inclination to attend to analytic detail and cut through that detail, as and when required. Such individuals are able to switch more readily between analytic and intuitive processing strategies.

This framework provides a useful tool regarding differences in information processing from an individual point of view. As the focus of this chapter is
concerned with the TMTs, it is also important to understand the cognitive composition of the team. Thus, the following section reviews cognitive style from a collective perspective.

### 3.4.2 Collective Cognition

Hodgkinson and Sparrow (2002) stated that specifically in the team context, several labels have been used to outline various concepts of shared cognition, such as collective cognition, team knowledge, team mental models, shared knowledge, transactive memory, and shared mental models. Collective cognition is defined in terms of the group processes involved in the acquisition, storage, transmission, manipulation, and use of information (Gibson, 2001). The key to understanding this form of cognition is to examine the patterns of connections between individuals and the weights that are put on them. Gibson (2001: 123) stated that “collective cognition does not reside in the individuals taken separately, though each individual contributes to it. Nor does it reside outside them. It is present in the interrelations between the activities of group members”. The author observed that understanding collective cognition processes has important implications for organisational knowledge management and learning. Similarly, West (2007) argued that collective cognition is fundamentally different from individual cognition or from the aggregation of individual cognitions.

Cooke et al (2004) emphasised that teams perform cognitive tasks. That is, they detect and recognise pertinent cues, make decisions, solve problems, remember relevant information, plan, acquire knowledge, and design solutions or products as an integrated unit. These authors argued that team cognition is more than the sum of the cognition of the individual team members. Instead, team cognition emerges from the interplay of the individual cognition of each team member and team process behaviours. These two intertwined aspects of team cognition — individual cognition of team members and team process behaviours — are viewed as analogous to cognitive structures and cognitive processes at the individual level. With a newly formed team, team cognition begins as the sum of individual cognition. Then as the team interacts, dynamic changes occur in the team’s mind as a natural result of the
interaction. Team members interact through communication, coordination, and other process behaviours and in doing so transform a collection of individuals’ knowledge to team knowledge that ultimately guides action. In other words, the outcome of this transformation is effective team cognition.

Rentsch, Delise, Salas and Letsky (2010) suggested that teams consisting of team members who each possess expert knowledge must extract and integrate team members’ information to exploit the team’s decision making capacity. Team members must transfer their knowledge such that the knowledge initially possessed by individual team members become usable by all team members. Once the knowledge is available collectively, the team increases its ability to elaborate, integrate and synthesize the unique knowledge in combination with common knowledge, thereby increasing the team’s potential to develop a common understanding of the task and to generate effective solutions to complex problems (Rentsch, Delise and Hutchison, 2008). Cannon-Bowers and Salas (2001) stated that shared cognition leads to better team processes, which in turn lead to better task performance, such as more efficient communication, more accurate expectations and predictions, consensus, similar interpretations, and better coordination.

3.4.3 Dominant Management Logic

One of the important outcomes of organisational demographics research has been the development of the concept of ‘dominant management logic’ or the cognitive maps of the management teams. With regard to organisational cognitive maps, Prahalad and Bettis (1986) proposed that firm’s strategic decisions are guided by a dominant management logic, that is, a shared understanding of the factors relevant to the business strategy and the relationship between these factors. The authors suggested that the dominant logic is a shared schema (a term generally used to describe individual-level cognitive structures) developed as a result of the experiences of the key executives among the dominant coalition of the organisation. According to the authors, dominant logic is a mind set or a world view, or conceptualisation of the business and the administrative tools to accomplish goals and make decisions in that
business. It is stored as a shared cognitive map (or set of schemas) among the dominant coalition and it is expressed as a learned, problem solving behaviour.

Prahalad and Bettis (1986) suggested that schemas permit managers to categorise an event, assess its consequences, and consider appropriate actions and to do so rapidly and often efficiently. Without schemas, a manager and ultimately the organisations with which he is associated, would become paralysed by the need to analyse 'scientifically' an enormous number of ambiguous and uncertain situations. In other words, managers must be able to scan environments selectively so that timely decisions can be made (Hambrick, 1982).

While these authors defined the dominant management logic as the way the TMT members collectively understand their environment, Leonard et al (2005: 125) proposed that the dominant logic is the result of social interaction over time and this continued social interaction also leads to a cognitive “style” or patterns of behaviour by the TMT which they termed “group cognitive style”. Group cognitive style has been defined broadly as group-level patterns of behaviour in the strategic decision making process of a group (Leonard et al, 2005). The proposed model suggests that decision process differences are the result of differences in the cognitive style of the group as a whole. It is suggested that, just as individuals have a cognitive style, over time as the group members interact with each other and with the decision making environment, they develop patterns of behaviour in terms of how they gather and process information, and how they evaluate that information in order to make a decision. The cognitive style of the groups is proposed to reflect differences in the composition and structure of the group, as well as the cognitive style and the social interaction of individual group members.

In their later development of the dominant logic perspective, Bettis and Prahalad (1995) have come to view the dominant logic as an information filter whereby organisational attention is focused only on data deemed relevant by the dominant logic, other data are largely ignored. Accordingly, relevant data are filtered by the dominant logic and by the analytic procedures managers use to aid strategy development. These filtered data are then incorporated into the strategy, systems,
values, expectations, and reinforced behaviour of the organisation. In this regard, Bettis and Prahalad (1995) asserted that the dominant logic can be viewed as a fundamental aspect of organisational intelligence, and an emergent property of complex organisations seeking to adapt. It provides a set of heuristics that simplify and speed decision making, and allows the organisation to ‘anticipate’ the environment. When conditions change, a new dominant logic must be developed quickly (including unlearning the old dominant logic) if the organisation is to survive.

3.4.4 Cognitive Diversity in Groups

Cognitive diversity, defined as differences in beliefs and preferences relating to various goals of the organisation, is found to exist among CEOs and members of their TMTs (Miller, Burke and Glick, 1998). The result of such differences can affect the way an issue is interpreted or a problem is formulated. Research on group problem solving demonstrated that cognitive resources are a key determinant of group performance (Yetton and Bottger, 1983). Cognitive resources can differ in both degree and kind. Regarding differences in degree, the general view is that groups composed of people with higher levels of knowledge and ability perform better on creative problem-solving tasks than groups with lower levels of these resources. Bantel and Jackson (1989) argued that knowledge and ability facilitate the identification and formulation of problems, as well as the identification and evaluation of feasible solutions. Regarding differences in kind, it is suggested that when solving complex, non-routine problems, groups are more effective when composed of individuals having a variety of skills, knowledge, abilities, and perspectives (Shaw, 1976; Wanous and Youtz, 1986). Therefore, cognitive diversity is a valuable resource. In other words, the presence of people with differing points of view ensures consideration of a larger set of problems and a larger set of alternative potential solutions. The need to reconcile dissimilar solutions stimulates effective group discussion, prevents ‘groupthink’ and leads to high quality and original decisions (Janis, 1972; Nemeth, 1985; Hoffman and Maier, 1961; Hoffman, 1959; Hall, 1982).
Gallen’s study (2009) found support that, as in the individual level (Gallen, 2006), the cognitive composition of the TMT has an effect on strategic decisions at the team level, and thus could prove a more promising measure of heterogeneity than the traditional demographic measures. Furthermore, Olson et al (2007) stated that it is imperative to understand how differing viewpoints affect decision making process in management teams. The authors examined cognitive processes within strategic decision making specifically focusing on cognitive diversity, task conflict, and competence-based trust to determine their impact on decision outcomes. Their findings suggested that cognitive diversity is beneficial in the decision making process: both competence-based trust and task conflict were found to act as moderators/mediators within the decision process, which benefit the decision understanding, decision commitment, and the overall decision quality.

On the other hand, Kisfalvi and Pitcher (2003) found that, because of some CEOs’ own extensive knowledge of and feel for their firms and their markets, they are able to make strategic choices that have a positive impact on performance in the absence of a cognitively rational team process, thereby challenging the underlying assumption in the TMT literature that good decisions reflect the consensus resulting from the free exchange of ideas within a diverse team. The authors argued that it is possible that strategic decisions based on optimal information and group consensus, i.e. rational decisions, may not necessarily always be better or more innovative than those based on a CEO’s flash of intuition.

3.5 Conclusion

This chapter presented a selective review of the literature on decision making in TMTs to show the development of research in this field over the years. Particular interest in three aspects of TMTs has been identified. These are team composition, dynamics of team decision making processes, and team cognition. The key points from the literature review are summarised below.

Research on TMTs started with Hambrick and Mason’s (1984) theory of upper echelons which stated that organisational outcomes can be predicted by managerial
background characteristics. Whilst the theory has been subject to much attention at the time, it has later on been criticised in its limitations to assume a consistency of conditions; neglect the team processes that senior executives are involved in; and ignore deeper-level characteristics of top managers. In this respect, research moved from demographics to explore the strategic decision making processes, i.e. the dynamics of the decision process and the interactions that take place among the top managers. Notable work has focused on investigating how managers make fast yet high-quality strategic decisions in fast-moving environments, and the political activity that takes place in TMT decision making. Most recently a separate stream of research focused on cognition in TMTs in relation to individual differences in information processing and collective cognition.

These developments in the literature suggest that the current literature offers a useful, however limited perspective of decision making processes in TMTs. It appears that little research has been done which attempts to link intuition to the decision making processes in the TMTs. Despite integration of behavioural aspects focused on group composition and interactions in relation to performance outcomes, the body of research has not fully explored the role played by intuition in TMT decision making.

This thesis aims to address this gap in the literature. The next chapter introduces the organisational learning framework which, by combining both the individual level of intuition and the group level of TMT decision making, frames the scope of this research.
Chapter 4 Organisational Learning

4.0 Introduction

There has been extensive research over several decades on organisational learning. Multiple conceptualisations and theoretical formulations have been presented (Crossan et al, 1999; Easterby-Smith, 1997; Fiol and Lyles, 1985; Argyris and Schön, 1978; Huber, 1991; Levitt and March, 1988; also see Bapuji and Crossan, 2004, and Easterby-Smith, Crossan and Nicolini, 2000 reviews). For example, Fiol and Lyles (1985) suggested that learning is the development of insights, knowledge, and associations between past actions, the effectiveness of these actions, and future actions. Some scholars argued that learning occurs through individuals and that organisations do not learn by themselves (Dodgson, 1993), while others contended that learning occurs at the social level i.e. group and organisation (March, 1991). There is growing consensus in the literature that learning is multifarious, i.e. it can be behavioural and cognitive, exogenous and endogenous, methodical and emergent, incremental and radical, and can occur at various levels in an organisation (Bapuji and Crossan, 2004).

The aim of this chapter is to review organisational learning from the perspective of the 4I framework (Crossan et al, 1999) as it forms a conceptual anchor for this research given its explicit acknowledgement of the role of intuition in collective learning. The chapter is organised in six sections as follows: the first section provides a general overview of organisational learning research; the second section presents the 4I framework; the third section reviews the SECI-ba as a model of organisational knowledge creation; the fourth section presents a selection of research on the 4I framework and develops a comprehensive conceptual framework in light of this review; the fifth section concludes the chapter; and the final section provides an integrative summary of the three literature review chapters.
4.1 Overview of Organisational Learning Research

Interest in organisational learning dates back to 1950s, and the origin of the concept of organisational learning can be traced to the foundational work of Cyert and March (1963) who were first to articulate the idea that an organisation could learn in ways that were independent of the individuals within it.

Two seminal contributors to organisational learning theory are Argyris and Schön (1978) who proposed that organisations learn through individuals acting as agents for firms. The scholars developed the concepts of single- and double-loop learning, and explained learning in terms of individual level error detection and error correction. Accordingly, single-loop learning is linked to incremental change, and double-loop learning is linked to radical change (e.g. change in strategic direction).

The 1980s saw a number of foundational works, such as Hedberg (1981), Shrivastava (1983), Daft and Weick (1984), and Fiol and Lyles (1985) whose contributions were significant in terms of defining the terminology of organisational learning. In 1990s the literature on organisational learning has focused on the processes involved in individual and collective learning inside organisations. March (1991), Huber (1991), and Simon (1991) were influential in setting the research agenda of this decade. March (1991) was among those who argued that organisational learning was simply the sum of what individuals learn within organisations. Similarly, Simon (1991: 125) asserted that organisational learning is about individual learning since “all learning takes place inside individual human heads”. However, others argued that organisational learning was more than the learning of its individual members. For example, the social constructionist perspective suggested that learning occurs and knowledge is created through conversations and interactions between people (Brown and Duguid, 1991; Lave and Wenger, 1991; Gherardi and Nicolini, 2001). Eventually, the levels of analysis debate moved from individual to group and integrated organisation level to examine learning in a more dynamic way (Crossan et al, 1999).
At the time there was a lack of convergence in organisational learning theories and different schools of thought started to emerge. Bell, Whitwell and Lukas (2002) offered four schools of thought each with distinctive focus of interest: the economic school (learning by doing) (e.g. Arrow, 1962; Lieberman, 1987); the developmental school (learning by evolution) (e.g. Dechant and Marsick, 1991; Torbert, 1994); the managerial school (learning by management-led change) (e.g. Senge, 1990, 1993; Garvin, 1993); and the process school (learning by information processing) (e.g. March, 1991; Huber, 1991; Cyert and March, 1963; Argyris and Schön, 1978).

In a review of the literature, DeFillippi and Ornstein (2003) incorporated psychological theory into organisational learning and identified four broad theoretical approaches: information processing; behavioural/evolutionary; social construction; and applied learning perspectives.

The information processing perspective views organisations as systems of information (Huber, 1991). This approach assumes that information, knowledge or learning is stored in collective memory based on the cumulative experiences of individuals comprising the organisation. It is predicated on shared mental models of interpretation to give meaning to information. Huber (1991: 89) stated that “an organisation learns if any of its units acquires knowledge that it recognises as potentially useful to the organisation.” This is based on an individualistic learning perspective with the assumption that “an organisation learns something even if not every one of its components learns that something” (Huber, 1991: 89).

Behavioural theories of organisational learning focus on the antecedents to and changes in organisation’s routines and systems as the organisation responds to its own experience and that of other organisations. Nelson and Winter (1982) developed the ‘evolutionary model of the firm’ theory which presumes that organisations learn by encoding inferences from history into routines that guide behaviour. As such, behavioural theories rely on the notion that all current learning is influenced by the past (the path-dependence notion, Nelson and Winter, 1982).
The social constructionist perspectives of organisational learning emphasise the social context whereby learning is embedded in the relationships and interactions between people (Orr, 1990; Wenger, 1998) which takes place in action and through action (Gherardi and Nicolini, 2001). Learning therefore has to do with participating and becoming a member of a community of practice (Lave and Wenger, 1991; Brown and Duguid, 1991) which shares a common language, values and practices. Gherardi and Nicolini (2001: 47) take the sociologist approach to learning that is “produced and reproduced in the social relations of individuals when they participate in society”. The authors suggested that organisational learning enables exploration of an organisation as though it were a subject that learns, processes information, reflects on experiences, and possesses a stock of knowledge, skills and expertise.

The applied perspectives of organisational learning suggest that learning is grounded in direct experience and also requires active intervention by trained facilitators or consultants to improve organisational and individual learning practices. The applied learning perspective adopts a multiple levels view of learning. For example, Coghlan (1997) offered a recent view of organisational learning as a dynamic inter-level process that inter-relates learning by individuals, teams, interdepartmental groups and organisations. This kind of a multi-level perspective on organisational learning is also evident in other applied perspectives, such as Senge (1990).

Crossan et al’s (1999) work is another example of multi-level research. The authors developed the 4I framework to explain how individuals and groups in organisations collectively engage in social actions of learning, involving both behavioural and cognitive changes. The theory provides an integrative framework of how learning occurs at the individual, group and organisation levels, how learning at one level impacts learning at other levels, and how knowledge flows from one level to the others. As the main focus of the current research, the 4I framework of organisational learning is discussed in the following section in detail.
4.2 The 4I Framework of Organisational Learning

Crossan et al (1999) view organisational learning as the process of change in thought and action – both individual and shared – embedded in and affected by the institutions of the organisations. They define it as a dynamic process, occurring over time and across levels, that involves a tension between new and existing learning. Crossan and her colleagues (Crossan et al, 1999) offered what they term a ‘4I model’ of organisational learning (see Figure 4.1) that occurs over three levels: individual, group and organisation, each informing the others. These three levels of learning are linked by four social and psychological processes: intuiting, interpreting, integrating and institutionalising (the 4Is). In this model, intuiting and interpreting occur at the individual level, interpreting and integrating occur at the group level, and integrating and institutionalising occur at the organisation level. The various processes overlap at the interface between the levels.

**Figure 4.1 4I Organisational Learning Framework**

![Diagram showing the 4I Organisational Learning Framework](image)

Source: Crossan, Lane and White, 1999
Crossan et al (1999: 525) defined the 4I processes as follows:

“**Intuiting** is the preconscious recognition of the pattern and/or possibilities inherent in a personal stream of experience. This process can affect the intuitive individual’s actions, but it only affects others when they attempt to (inter)act with that individual. **Interpreting** is the explaining, through words and/or actions, of an insight or idea to one’s self and to others. This process goes from the preverbal to the verbal, resulting in the development of language. **Integrating** is the process of developing shared understanding among individuals and of taking coordinated action through mutual adjustment. Dialogue and joint action are crucial to the development of shared understanding. This process will initially be ad hoc and informal, but if the coordinated action taking is recurring and significant, it will be institutionalised. **Institutionalising** is the process of ensuring that routinised actions occur. Tasks are defined, actions specified, and organisational mechanisms put in place to ensure that certain actions occur. Institutionalising is the process of embedding learning that has occurred by individuals and groups into the organisation, and it includes systems, structures, procedures, and strategy.”

The 4I framework offers useful insights on how intuitions get articulated and transcend from the enterprising individuals to a wider organisational system (Crossan et al, 1999; Crossan and Berdrow, 2003; Dutta and Crossan, 2005). According to this framework, ideas occur to individuals through ‘intuiting’ on the basis of their prior experience and recognition of patterns. Crossan et al (1999) stated that intuition is a uniquely individual process. It may happen within a group or organisational context, but the recognition of a pattern or possibility comes from within an individual; organisations do not intuit. Intuiting focuses on the subconscious process of developing insights and as individuals begin to explain what once were simply feelings, hunches or sensations the process of interpreting begins picking up on the conscious elements of the individual learning process. Regrettably, the model conflates insight and intuition (see Chapter 2). The process of intuiting is an important part of the 4I framework and a distinction is made between ‘expert’ and ‘entrepreneurial’ intuition. Dutta and Crossan (2005) state that expert intuition is based on (past) pattern recognition and it emphasises the complex knowledge base of the individual as being the primary means by which patterns are recognised; whereas entrepreneurial intuition relies on the individual’s creative capacity to recognise gaps and to identify (future) possibilities.
Through ‘interpreting’ individuals develop cognitive maps about various domains in which they operate. Language plays a significant role in the development of these maps and as individuals ultimately share those ideas within a group, the interpretive process moves beyond the individual and becomes embedded within the workgroup; it becomes integrative.

‘Integrating’ within the 4I model occurs by developing shared understanding, and the taking of coherent and collective action by the members of the group. It is through the continuing conversation among the members of the community and through shared practice that shared understanding or ‘collective mind’ (Weick and Roberts, 1993) develops, and mutual adjustment and negotiated action take place. This process will initially be ad hoc and informal but if the coordinated action taking is recurring and significant, it will be institutionalised.

‘Institutionalising’ is the process of embedding learning that has occurred by individuals and groups into the organisation. The underlying assumption is that organisations are more than simply a collection of individuals and thus organisational learning is different from the simple sum of the learning of its members. Although individuals may come and go, what they have learned as individuals or in groups does not necessarily leave with them. Some learning is formalised and embedded in the systems, structures, procedures, strategies, and investments in information systems and infrastructure. This institutionalisation is the means for organisations to leverage the learning of the individual members (Crossan et al, 1999).

Crossan et al (1999) view organisational learning as a dynamic process whereby understanding guides action, but action also informs understanding. The authors stated that this creates a tension between assimilating new learning (feed forward) and exploiting or using what has already been learned (feedback). Accordingly, individual intuiting feeds forward new ideas to groups who in turn interpret and integrate the information, thereby permitting exploration, new learning and coherent collective action. At the same time, institutionalising at the level of the organisation feeds back to the group and individual levels, exploiting what has been learned, affecting how people act and think, and causing tension with feed forward processes.
Building on the 4I framework, Vera and Crossan (2004) investigated how the dominant coalition of the firm influences the strategic process of organisational learning. The fundamental premise of the conceptual framework they presented in this work was that at certain times organisational learning processes thrive under transactional leadership, and at other times they benefit more from transformational leadership. Particularly in times of change, these processes make evident the need to alter the firm’s institutionalised learning — a task best suited to transformational leadership. On the other hand, in times of stability, organisational learning processes serve to refresh, reinforce, and refine current learning — a task best suited to transactional leadership. Vera and Crossan (2004) concluded that in order to manage organisational learning, the most effective strategic leaders will be those best able to function in both transformational and transactional modes, and that both leadership styles are effective in facilitating organisational learning, albeit in different situations.

4.3 SECI-ba Model of Knowledge Creation

According to Vera and Crossan (2005), learning and knowledge are intertwined in an iterative, mutually reinforcing process: while learning (the process) produces new knowledge (the content), knowledge impacts future learning. An alternative theory to the 4I framework which clearly differentiates between learning processes and learning content is Nonaka and Takeuchi’s (1995) SECI-ba model. ‘ba’ is defined as a context in which knowledge is shared, created, and utilised in recognition of the fact that knowledge needs a context in order to exist (Nonaka, Toyama and Byosiere, 2001).

Nonaka, Konno and Toyama (1998) proposed a multi-layered model of ‘knowledge creation’ in order to understand how organisations create knowledge dynamically. According to this model, knowledge is created through a continuous and dynamic interaction between tacit knowledge and explicit knowledge in the creative activities of human beings (Nonaka et al, 2001). Nonaka et al (2001: 495) call the interaction of the two types of knowledge “knowledge conversion”. This conversion is a social process between individuals; it is not confined within an individual. Knowledge is
created through interactions between individuals with different types and contents of knowledge. This interaction is shaped through the SECI process (see Figure 4.2), that is, through the shifts from one mode of knowledge conversion to the next: (1) socialisation (from tacit knowledge to tacit knowledge); (2) externalisation (from tacit knowledge to explicit knowledge); (3) combination (from explicit knowledge to explicit knowledge); and (4) internalisation (from explicit knowledge to tacit knowledge). The ‘knowledge spiral’ represents a dynamic process in which the scale of the interaction between tacit knowledge and explicit knowledge increases as it moves up the levels of knowledge entities (e.g. individual, group, organisation, and inter-organisational actors).

**Figure 4.2 SECI-ba Model of Knowledge Creation**

Source: Nonaka and Takeuchi, 1995

As in the intuiting process of the 4I model, the knowledge creation process begins with ‘socialisation’ by bringing together tacit knowledge through shared experiences. Because tacit knowledge is context-specific and difficult to formalise, the key to acquiring tacit knowledge is to share the same experience through joint activities. It is through this social process that individuals sympathise or empathise with others, share feelings, emotions, experiences, and mental models. A classic example of socialisation is the learning of an apprentice; not largely through spoken words or
written textbooks but mainly by exposure, experience, observation, imitation and modelling.

The second process of SECI, ‘externalisation’, is the process of articulating tacit knowledge as explicit knowledge and it corresponds to the interpreting process of the 4I framework. Of the four modes of knowledge conversion, externalisation is the key to knowledge creation because it creates new, explicit concepts from tacit knowledge. When tacit knowledge is made explicit, “knowledge becomes crystallised” (Nonaka et al, 2001: 495) at which point it can be shared by others and can be made the basis for new knowledge. This relies on a social process of articulation. The successful conversion of tacit knowledge into explicit knowledge depends on the use of metaphors, analogies and models.

In the ‘combination’ process, discrete elements of explicit knowledge are connected into a set of explicit knowledge that is more complex and systematic than any of its parts. Similar to the integrating process of the 4I model, knowledge is exchanged and combined through such media as documents, meetings, telephone conversations, and computerised communication networks. In practice, combination entails three processes: first, explicit knowledge is collected from inside or outside the organisation and then combined; second, the new explicit knowledge is disseminated among the organisational members; and third, the explicit knowledge is edited or processed in the organisation in order to make it more usable.

Finally, ‘internalisation’ is the process of embodying explicit knowledge as tacit knowledge. It is closely related to learning-by-doing. Much like the institutionalising process of the 4I model, through internalisation, knowledge that is created is shared throughout an organisation. Internalised knowledge is used to broaden, extend, and reframe organisational members’ tacit knowledge. When knowledge is internalised in individuals’ tacit knowledge bases through shared mental models or technical know-how, it becomes a valuable asset. This tacit knowledge accumulated at the individual level is, in turn, shared with other individuals through socialisation, and it sets off a new spiral of knowledge creation. It should be noted that the SECI-
model is not unproblematic, especially with regard to the notion of the conversion of tacit knowledge to explicit knowledge (see Tsoukas, 2003).

Tsoukas (2003) asserted that Nonaka and Takeuchi's (1995) interpretation of tacit knowledge as 'knowledge-not-yet-articulated', i.e. knowledge awaiting for its translation or conversion into explicit knowledge, is greatly misunderstood. Tsoukas (2003) stated that this interpretation ignores the essential ineffability of tacit knowledge, thus reducing it to what can be articulated. According to Tsoukas (2001), new knowledge comes about not when tacit becomes explicit, but when our skilled performance is punctuated in new ways through social interaction.

It is important to draw the distinction between intuition and tacit knowledge. Epstein (1994) stated that the experiential (i.e. intuitive) system represents events primarily concretely and imagistically; it is capable of generalisation and abstraction through the use of prototypes, metaphors, scripts, and narratives. Whilst we are not able to tell the source of intuitions (i.e. how we know), we are able to explicitly communicate intuitions once we are aware of them (e.g. through metaphor). On the contrary, Tsoukas (2003) argued that tacit knowledge cannot be 'captured', 'translated', or 'converted' to explicit knowledge, but only displayed and manifested in what we do. This resonates with Polanyi's (1966: 4) statement that "we can know more than we can tell".

According to Polanyi (1962) (credited as the inventor of the term), tacit knowledge is associated with skilful performance and know-how. In his most famous example, Polanyi (1962) explains that in order to be able to ride a bicycle one needs to have the tacit knowledge of how to stay upright. This is knowledge that one possesses, not the activity of riding itself, but the knowledge used in riding. Whilst explicit knowledge can be used as an aid to acquire tacit knowledge (Cook and Brown, 1999) (e.g. telling someone how to turn to avoid a fall), explicit knowledge alone cannot enable someone to ride a bicycle. To do so, one must spend time on a bicycle to acquire the tacit knowledge necessary for riding, ultimately achieving competence by becoming unaware of how it is done.
To sum up, the review of the literature on SECI-ha suggests that the theory is more concerned with knowledge creation through conversion of tacit to explicit knowledge, and vice versa. As such, it does not consider the nature of organisational learning processes as it evolves from individual level to collective level (cf. Crossan et al, 1999). There is also no mention of the role of intuition in the knowledge creation process. While intuitions may be acquired tacitly, they are different from tacit knowledge in that intuitions are essentially 'judgements' (Dane and Pratt, 2007) which can be interpreted and communicated, whereas tacit knowledge remains essentially inarticulate (Polanyi, 1962) but manifested in behaviour.

Accordingly, given its explicit acknowledgement of the role of intuition in collective learning, the main focus of this research is the 4I framework of organisational learning. The remainder of this chapter reviews the theoretical and empirical developments on the 4I framework since its conception by Crossan et al in 1999.

4.4 Research to Date on 4I Framework

A number of empirical studies and conceptual developments of the 4I framework have been conducted and proposed with the purpose to advance the original model as introduced by Crossan et al (1999). In this section a selection of these studies will be reviewed in terms of their contribution to the knowledge on organisational learning from the perspective of the 4I framework.

4.4.1 Elaboration of Feed Forward and Feedback Processes

Kleysen and Dyck’s Study

Kleysen and Dyck (2001) criticised the 4I framework on the grounds that whilst Crossan et al (1999) recognised intuitions as the source of exploration and learning in organisations, they have not acknowledged the conscious perception of opportunities for learning and the role of attention to external circumstances as generators of new ideas. These authors argued that this omission gives the impression that organisational learning depends on the ‘eureka’ (i.e. insightful) experiences of
individuals. Given this criticism, in an attempt to conceptually expand the 4I framework, Kleysen and Dyck (2001) developed a linkage between the organisational learning framework and the environment. The authors suggested that in addition to intuiting, individuals are also engaged in an ‘attending’ process which may be a scanning or search process that gathers information from opportunity sources. The resultant information then becomes the raw material for intuition and new ideas. However, Kleysen and Dyck are not forthcoming on whether such attending processes are automatic or controlled (cf. System 1 versus System 2) or the extent to which they overlap with entrepreneurial alertness (Kirzner, 1979).

Furthermore, the authors introduced ‘championing’ and ‘coalition building’ as two socio-political processes to reflect the influence of power and leadership that are essential to feed forward learning. Accordingly, organisations need champions to carry ideas forward (even though they may have not originated the ideas). Championing and interpreting processes interact; champions actively promote particular metaphors and use language associated with new ideas in an effort to shape and direct conversation with the intent of changing cognitive maps and lessening resistance by those opposed. Championing is not however sufficient for new ideas and learning to become institutionalised. Coalition building is essential to feed forward new ideas from group to organisation levels. Kleysen and Dyck (2001) argued that coalition building and integrating processes are interacting to produce the necessary resources and support needed to realise the new idea into coherent and collective action.

Finally, the authors asserted that the 4I framework depicts but fails to specify the feedback processes from organisation to group, and from group to individual levels. In this regard, Kleysen and Dyck (2001) introduced two additional processes, and named them ‘encoding’ and ‘enacting’, to identify the feedback processes. Accordingly, the feedback process between organisation and group levels encodes institutional procedures and principles into group scripts which in turn are enacted by individuals. The authors suggested that encoding is the diffusion throughout the organisation of informational constraints on action such as managerial visions, policies and procedures; and enacting refers to the interaction of groups of
individuals in an information field that contains both the organisational encoding and the demands of actual work situations.

4.4.2 Facilitators and Impediments of Organisational Learning

Zietsma et al’s Study

In a longitudinal case study of the learning processes involved in the strategic renewal of MacMillan Bloedel (a forest company), Zietsma, Winn, Branzei and Vertinsky (2002) found evidence for a more active process of information seeking from the environment. The authors suggested that learning arose not only from subconscious and pre-verbal internal intuiting processes but also from careful ‘attending’ to external stimuli which bring external information into the organisation. The authors stated that some individuals, particularly unconstrained actors and characteristically open-minded people, are able to attend to divergent perspectives and engage in intuiting, especially if they have direct exposure to alternate views and/or relational ties to those who hold them.

Additionally, in their empirical study Zietsma et al (2002) found a parallel action-based learning process to interpreting, labelled ‘experimenting’, suggesting that individuals and groups act on, test and develop their interpretations through experimenting which adds substance to their cognitive interpretations. The authors showed that action involves experiments that generate additional data for interpreting. Accordingly, the results of unsuccessful experiments can be used to adjust interpretations while the results of successful experiments can assist intuiting individuals in integrating and institutionalising their learning.

Finally, the authors provided insights into the facilitators and impediments of the learning process (see Table 4.1 for the list). They also introduced the concept of a ‘legitimacy trap’ to describe an organisation’s over-reliance on institutionalised knowledge when external challenges arise. They explained that when an organisation feels that it is unfairly under attack by illegitimate sources, it can become caught in a
legitimacy trap, actively and dysfunctionally resist pressures for change, and prevent the initiation of feed forward learning processes.

**Lehesvirta’s Study**

Lehesvirta (2004) conducted an ethnographic study of the learning processes in a metal industry company over a four-year period. The author used Crossan et al.’s (1999) 4I framework to examine the critical elements of learning sub-processes and shed some light on how the sub-processes on different levels of learning are linked with each other. The study revealed that conflicts and confusion were significant incentives for learning, which started intuiting process in either an open confrontation or through a collision in an individual’s mind. The author found that sharing of intuitions appeared to be incidental which has implications on information sharing as a precondition for collective interpretation and integration. Furthermore, Lehesvirta (2004) stated that sharing one’s intuitions requires not only the ability to recognise the significance of information, but also the ability and willingness to share.

**Schilling and Kluge’s Study**

In a conceptual paper Schilling and Kluge (2009) described impediments to organisational learning based on the expanded 4I model as developed by Lawrence, Mauws, Dyck and Kleysen (2005), and analysed the impact of particular barriers on different kinds of organisational units. The authors used the four learning processes of intuiting, interpreting, integrating and institutionalising to categorise the barriers to organisational learning, and adopted three forms of influencing factors.
<table>
<thead>
<tr>
<th>Feed Forward Mechanisms</th>
<th>Facilitators</th>
<th>Impediments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intuiting/Attending</td>
<td>• Situation: (attending)</td>
<td>• Isolation from direct pressures</td>
</tr>
<tr>
<td></td>
<td>• Direct exposure to alternate views</td>
<td>• Previously institutionalised learning in the firm and the field</td>
</tr>
<tr>
<td></td>
<td>• Relational ties with those holding alternate views</td>
<td>• Perception of illegitimacy of pressure source</td>
</tr>
<tr>
<td>Interpreting</td>
<td>• Person: (intuiting)</td>
<td></td>
</tr>
<tr>
<td>Level: individual</td>
<td>• Unconstrained actor</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Openness to divergent views</td>
<td></td>
</tr>
<tr>
<td>Interpreting/Experimenting</td>
<td>• Autonomy of action or endorsement by powerful others</td>
<td>• Isolation of new learning (individuals within groups)</td>
</tr>
<tr>
<td>Integrating</td>
<td>• Internalisation of divergent stakeholder views</td>
<td></td>
</tr>
<tr>
<td>Level: individual to group</td>
<td>• Joint sense-making through data collection and modelling</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Allocation of power and resources to integrating</td>
<td></td>
</tr>
<tr>
<td>Integrating</td>
<td>• Erosion of support for previously institutionalised interpretations</td>
<td>• Isolation of new learning (groups within the organisation)</td>
</tr>
<tr>
<td>Institutionalising</td>
<td>• Endorsement of trusted niche representatives</td>
<td></td>
</tr>
<tr>
<td>Level: group to organisation</td>
<td>• Solution’s effectiveness for dealing with an organisational problem</td>
<td></td>
</tr>
</tbody>
</table>

Source: Adapted from Zietsma et al, 2002
These are: actional-personal (characterised by individual thinking, attitudes, and behaviour); structural-organisational (rooted in organisational strategy, technology, culture and formal regulations); and societal-environmental (characterised by the perceived changes and developments in the external organisational environment which are relevant at all stages of the organisational learning processes). The authors reviewed an extensive literature on organisational learning and identified an exhaustive list of impediments to organisational learning, these are summarised in Table 4.2.

Schilling and Kluge (2009) view organisational environment as an important aspect in the organisational learning process. The authors expanded the 4I framework to include the external environment as the background of the organisation, representing those parts of the social and material world that members perceive as relevant for organisational action (e.g. customers, suppliers, competitors, socio-political environment, technology). The interrelation between the organisation and its environment is intended to represent the flow and processing of information. According to the authors, the organisational environment is relevant at all stages of the organisational learning process, as perceived changes and developments in the external organisational environment are important sources of ideas and innovation in organisation. Schilling and Kluge (2009) asserted that the generation of new ideas (i.e. intuiting), their interpretation by certain groups, their integration as organisational products and practices, and their implementation would rely on the complexity of the data collected from the environment. As a result, the authors suggested that the three forms of influencing factors (i.e. actional-personal, structural-organisational, and societal-environmental) on the organisational learning process should be distinguished from the levels of analysis (i.e. individual, group, and organisation).

**Berends and Lammers’ Study**

Building on the 4I framework, Berends and Lammers (2010) examined organisational learning processes in a longitudinal case study of implementation of knowledge management in an international bank, focusing on the social and temporal
structuring of learning over time. The authors found that learning did not progress along a linear path, and identified discontinuities where micro-processes of organisational learning were interrupted or did not progress from level to level. In regard to the social structuring, the authors found that the involvement of individuals and groups changed over time due to political interventions, thereby interrupting some micro-processes of learning, and triggering or reinforcing others. The findings showed the importance of timing in the progress of learning and politics of organisational learning. Accordingly, temporal structures were found to be a source of tension, and triggered political interventions to speed up, interrupt or postpone processes. Additionally the study revealed that who is involved in learning affects what learning occurs when, and vice versa.

4.4.3 Organisational Learning and Strategic Renewal

Crossan and Berdrow’s Study

Crossan and Berdrow (2003) conducted empirical research to examine the process of strategic renewal in a comprehensive case study of Canada Post Corporation. The authors used the 4I framework to explore the underlying processes that form the tension between exploration and exploitation. Whilst the authors have not expanded the original 4I framework, they acknowledged the value of a champion (as introduced by Kleysen and Dyck, 2001) to articulate a vision and persuade others to accept it, in order for the intuitions and interpretations to be shared and integrated. Additionally, they observed issues such as constrained power and hierarchical leadership emerging from the case study, which are not directly taken into account in the original framework.

4.4.4 Power and Political Dynamics in Organisational Learning

Lawrence et al’s Study

In a conceptual paper, Lawrence et al (2005) criticised Crossan et al’s (1999) 4I framework on the basis that it neglects the role of power and politics, and that
consequently it is insufficient to address the issue concerning which new ideas will
form the institutions of the organisation, and which institutions will provide the basis
for further intuitions. In this respect, the authors explored the political dynamics of
organisational learning and proposed the integration of a set of political strategies
into the 4I organisational learning framework. The authors asserted that different
forms of power in organisations are connected to specific learning processes:
intuition is linked with discipline; interpretation with influence; integration with
force; and institutionalisation with domination.

More specifically, Lawrence et al (2005) argued that interpreting an idea so that it
becomes accepted by others necessarily involves influence, whether on the part of
the originator of the idea or some other actor who champions the idea. By using
political strategies to affect the language and cognitive maps that others adopt and
construct, influence is useful to overcome the ambiguity and uncertainty associated
with interpretation. Lawrence et al (2005) identified that the most important political
strategy during the integrating process is force, which facilitates the accomplishment
of collective action by creating the circumstances that restrict the options available to
the organisational members, such that they were unable to do other than enact those
new ideas.

According to these authors, within the context of organisational learning, the most
effective political strategy for institutionalisation is domination which overcomes
potential resistance to change and thus supports institutionalisation. Finally,
Lawrence et al (2005) proposed that the political dynamics of intuition involve
discipline as a form of power that helps organisational members to gain expertise that
is necessary to foster intuition. Accordingly, important forms of discipline in modern
work organisations include practices such as socialisation, compensation, training,
and teamwork. The authors suggested that an examination of these different forms of
power provides a basis for understanding why some intuitions become institutionalised while others do not.
<table>
<thead>
<tr>
<th>Actional-Personal</th>
<th>Structural-Organisational</th>
<th>Societal-Environmental</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Intuiting</strong></td>
<td><strong>Intuiting</strong></td>
<td><strong>Intuiting</strong></td>
</tr>
<tr>
<td>Biased perceptions</td>
<td>Lack of clear, measurable goals</td>
<td>Complex, dynamic and competitive market environments</td>
</tr>
<tr>
<td>Superstitious learning</td>
<td>Stocks and inventories</td>
<td>Branch with unclear success criteria</td>
</tr>
<tr>
<td>Lack of know-how</td>
<td>Narrow corporate identity</td>
<td>Cultural distance and low level experience in relevant culture</td>
</tr>
<tr>
<td>Lack of motivation</td>
<td>Monolithic corporate culture with homogenous workforce</td>
<td>Complex, ambiguous, difficult knowledge</td>
</tr>
<tr>
<td>High levels of stress</td>
<td></td>
<td>Implicit, immobile knowledge</td>
</tr>
<tr>
<td>Professional identity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fear of disadvantages</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Restrictive, controlling management</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Interpreting</strong></td>
<td><strong>Interpreting</strong></td>
<td><strong>Interpreting</strong></td>
</tr>
<tr>
<td>Fear of loss of ownership/control of knowledge</td>
<td>Organisational silence</td>
<td>Knowledge incompatible with existing mindsets</td>
</tr>
<tr>
<td>Lack of political/social skills of innovator</td>
<td>Status culture</td>
<td></td>
</tr>
<tr>
<td>Low status, confidence and trustworthiness of innovator</td>
<td>Missing link between knowledge and organisational goals</td>
<td></td>
</tr>
<tr>
<td>Confictual relationship between innovator and group</td>
<td>High workload and frontline context</td>
<td></td>
</tr>
<tr>
<td>Perceived lack of relative advantage over existing practices</td>
<td>Failure-avoidance</td>
<td></td>
</tr>
<tr>
<td>Lack of absorptive/retentive capacity</td>
<td>Ego-defences of strong collective identity</td>
<td></td>
</tr>
<tr>
<td>Lack of motivation and anxiety</td>
<td>Divergent objectives, values and hidden agendas in the group</td>
<td></td>
</tr>
<tr>
<td><strong>Integrating</strong></td>
<td><strong>Integrating</strong></td>
<td><strong>Integrating</strong></td>
</tr>
<tr>
<td>Fear of disadvantages for team benefit</td>
<td>Competition with other teams/units</td>
<td>Industrial recipes against innovation</td>
</tr>
<tr>
<td>Lack of recognition/fear of punishment for innovation</td>
<td>Long-term organisational success</td>
<td>Time lag between organisational action and environmental response</td>
</tr>
<tr>
<td>Lack of formal authority by innovator</td>
<td>Inadequate communication between units</td>
<td></td>
</tr>
<tr>
<td>Lack of top management support</td>
<td>Power structures and relations</td>
<td></td>
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<tr>
<td>-------------------------------</td>
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<td></td>
</tr>
<tr>
<td>Over-confidence of managers in</td>
<td>Ineffective resource allocation</td>
<td></td>
</tr>
<tr>
<td>existing practices</td>
<td>Lack of learning orientated values</td>
<td></td>
</tr>
<tr>
<td>Rigid, outdated core beliefs/values</td>
<td>Lack of fit between innovation and organisational beliefs</td>
<td></td>
</tr>
<tr>
<td>Manager's desire to retain positive self-image</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inconsistency between employees' and managers' metaphors/visions</td>
<td></td>
<td></td>
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<tr>
<td>Defensive routines of other units</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lack of participation/communication</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived incompatibility with culture and structure of organisation</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Institutionalising</th>
<th>Perceived irrelevance of innovation for future purpose</th>
<th>Stable/static workplace conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lack of knowledge to implement</td>
<td>Lack of time and resources</td>
</tr>
<tr>
<td></td>
<td>Perforated memories</td>
<td>High employee/management turnover</td>
</tr>
<tr>
<td></td>
<td>Laisser-faire senior management style</td>
<td>Lack of clear responsibility</td>
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<tr>
<td></td>
<td>Inadequate down-the-line leadership</td>
<td>concerning the implementation</td>
</tr>
<tr>
<td></td>
<td>Past experiences of conflicts</td>
<td>Lack of a consistent norm system</td>
</tr>
<tr>
<td></td>
<td>Low level of acceptance and trust</td>
<td>Inconsistent organisational strategy, systems, policies and practices</td>
</tr>
<tr>
<td></td>
<td>Cynicism towards organisation or innovation</td>
<td>Inconsistency between initial goals and success criteria to evaluate</td>
</tr>
<tr>
<td></td>
<td>Divergent aspirations of teams</td>
<td>Decentralisation</td>
</tr>
<tr>
<td></td>
<td>Low degree of openness to new ideas</td>
<td>Lack of means and measures to control behaviour and performance</td>
</tr>
<tr>
<td></td>
<td>Opportunistic behaviour</td>
<td></td>
</tr>
</tbody>
</table>

Source: Adapted from Schilling and Kluge, 2009
4.4.5 Inter-Organisational Learning

*Jones and Macpherson's Study*

Jones and Macpherson (2006) explored how mature Small Medium Enterprises (SME) which lack internal resources access external knowledge to facilitate strategic renewal through inter-organisational learning. The authors extended the 4I framework by incorporating an external dimension, labelled 'intertwining', to the institutionalisation of knowledge in SMEs. In three case studies, the authors showed how external actors (customers, suppliers, and knowledge providers) can play an active role by intertwining knowledge to support the development of processes, systems, and routines that distribute and institutionalise learning throughout the organisation.

Jones and Macpherson (2006) stated that intertwining indicates active engagement between the organisation and its external knowledge network, and signifies that learning mechanisms are at the interstices between organisations and not just within organisational boundaries. In their extension of the 4I framework, the authors acknowledged the additions of 'attending' and 'experimenting' by Zietsma et al (2002). The authors asserted that intertwining promotes a feedback learning flow within the recipient company. Accordingly, the institutionalisation of external knowledge leads to a cycle of integrating, interpreting, and intuiting as employees learn from operating new procedures. The authors emphasised the importance of the links with customers, suppliers, and knowledge providers as the most accessible sources of learning (e.g. customer requests for improvements in products and services; supplier suggestions for cost reductions by streamlining joint processes; or knowledge sharing with academic sources).

Each of the three case studies demonstrated three different types of learning processes: 'normative' learning as a result of the influence of professional bodies in the case of human resource issues; 'mimetic' learning by copying best practice from other organisations; and ‘coercive’ learning as a result of direct pressure from an external organisation for the adoption of new knowledge.
4.4.6 Leadership and Organisational Learning

Berson et al's Study

Berson, Nemanich, Waldman, Galvin and Keller (2006) provided a conceptual and empirical review of research on leadership and organisational learning. The authors built their review on the distinction between exploration and exploitation, and the 4I framework of organisational learning by linking leadership constructs and processes of organisational learning at different levels of analysis as presented by Crossan et al (1999).

Berson et al (2006) suggested that leaders play a central role in the organisational learning processes in multiple ways: leaders provide the contextual support in the organisation by obtaining the needed resources for learning to occur through exploration and exploitation; leaders enable and enhance integration by providing a foundation of shared understandings of needs and purpose at different levels of the organisation; leaders are important in institutionalising learning by integrating new and existing knowledge in the organisation's policies and practices.

In their review, the authors presented leadership as a positive influence on organisational learning, however they acknowledged that authoritarian and management-by-exception forms of leadership may actually inhibit learning. Accordingly, when leaders rely on warnings and fear, followers may avoid bringing new ideas and accept institutional procedures which may hinder the learning process.

Table 4.3 provides a summary of the relevant research on the 4I framework as reviewed in this section.
Table 4.3 Summary of Relevant Research on 4I Framework

<table>
<thead>
<tr>
<th>4I Processes</th>
<th>Key Contribution</th>
<th>Authors</th>
<th>Type of Study</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Discipline</td>
<td></td>
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<tr>
<td></td>
<td>Barriers</td>
<td></td>
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<tr>
<td></td>
<td>Discontinuities</td>
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<tr>
<td></td>
<td></td>
<td>Schilling &amp; Kluge (2009)</td>
<td>Conceptual</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Berends &amp; Lammers (2010)</td>
<td>Conceptual</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Empirical</td>
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<tr>
<td></td>
<td>Influence</td>
<td></td>
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<td></td>
<td>Barriers</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Discontinuities</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>Schilling &amp; Kluge (2009)</td>
<td>Conceptual</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Berends &amp; Lammers (2010)</td>
<td>Conceptual</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Empirical</td>
</tr>
<tr>
<td>Integrating</td>
<td>Coalition building</td>
<td>Kleysen &amp; Dyck (2001)</td>
<td>Conceptual</td>
</tr>
<tr>
<td></td>
<td>Force</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Barriers</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Discontinuities</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>Schilling &amp; Kluge (2009)</td>
<td>Conceptual</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Berends &amp; Lammers (2010)</td>
<td>Conceptual</td>
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<tr>
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<td>Empirical</td>
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<td></td>
<td>Barriers</td>
<td>Schilling &amp; Kluge (2009)</td>
<td>Conceptual</td>
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<tr>
<td></td>
<td>Discontinuities</td>
<td>Berends &amp; Lammers (2010)</td>
<td>Conceptual</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Empirical</td>
</tr>
</tbody>
</table>
4.4.7 Development of 4I Framework

This section presented a selection of the literature relating to the 4I organisational learning framework. In particular, several empirical and theoretical studies which expanded the conceptual underpinnings of the 4I model have been reviewed (as summarised in Table 4.3). In light of this review, the following integrative model is developed (Figure 4.3) by incorporating the recent contributions from the literature into the original 4I model.

Figure 4.3 Development of 4I Framework

Source: Adapted from Kleysen and Dyck, 2001; *Zietsma et al, 2002; Lawrence et al, 2005; Jones and Macpherson, 2006; Schilinger and Kluge, 2009
4.5 Conclusion

In summary, the 4I model (Crossan et al, 1999) regards organisational learning as a fundamental strategic process which, starting with an intuition, gets articulated and transcends from the individual to a wider organisational system. A similar process occurs in the SECI-ba model (Nonaka et al, 1998) where tacit knowledge accumulated at the individual level is converted into explicit knowledge through externalisation. However, for the purposes of this research, this theory is limited in that there is no mention of the role of intuition in the knowledge creation process, and additionally it does not consider the nature of organisational learning processes as it evolves from individual level to collective level. Accordingly, given its explicit acknowledgement of intuition in organisational learning, the main focus of this chapter has been the 4I framework.

4.6 Integrative Summary

The theoretical basis of this thesis has been set out in the previous three chapters of the literature review. Following these, the three primary concepts of this thesis are intuition, strategic decision making, and organisational learning. To recap, intuitions are “affectively charged judgements that arise through rapid, nonconscious and holistic associations” (Dane and Pratt, 2007: 40). Another definition of intuition specific to expertise based judgements is offered by Simon (1987: 63) who stated that intuitions “are simply analysis frozen into habit and into the capacity for rapid response through recognition”. As the second focus of this research, Hambrick and Mason (1984: 194) defined “strategic” decisions as complex and of major significance to the organisation which represent the most important responsibility of the senior management (Harrison and Pelletier, 1998). Finally, Vera and Crossan (2005) stated that organisational learning is the process of change in individual and shared thought and action, which is affected by and embedded in the institutions of the organisation. Accordingly, when individual and group learning becomes institutionalised, organisational learning occurs and knowledge is embedded in non-human repositories such as routines, systems, structures, culture, and strategy (Crossan et al, 1999).
Crossan et al’s (1999) 4I model provides a multi-level research framework, and forms the foundation of this research by integrating the individual level of intuition and group level of TMT decision making as presented in the previous chapters. In this respect, the 4I framework provides insights into the dynamics occurring within the management teams in the context of intuitive decision making. In the group level processes of interpreting and integrating, Crossan et al (1999) noted that language plays a critical role and is essential as a means of integrating ideas and negotiating actions with others. Individuals need to be able to communicate, through words and actions, their own cognitions. Accordingly, this process entails conversation and dialogue in order to develop a shared understanding within the group. Through conversation, decision making groups identify areas of difference and agreement, gain language precision, and develop a shared understanding of their task domain. As part of this process, groups negotiate mutual adjustments to their actions. The assumption is that a certain coherence of actions should emerge from a shared understanding of the situation, by which learning becomes embedded in the organisation’s systems, structures, procedures and practices.

The 4I framework acknowledges and integrates the three streams of research which form the foundation of this thesis. In this regard, the 4I framework views organisational learning as a result of the decisions and judgements which are initiated by the intuitions of individuals, that transcend to the group level by way of interactions between the members of the group through interpreting and integrating, and finally become institutionalised on the organisation level.

This chapter ends the literature review and the following chapter outlines the research methodology.
Chapter 5  Research Methodology

5.0 Introduction

The aim of this chapter is to outline the research methodology employed in the thesis. The chapter provides the rationale underlying the research philosophy adopted, and explains in detail the studies undertaken in order to achieve the research objectives. The chapter is organised in six sections and it addresses the following issues respectively: research objectives; research philosophy; research choice and approach; research strategy; research methods; and research design.

5.1 Research Objectives

The primary objective of this thesis is to undertake empirical research to explore the role of intuitive judgement in cognition and decision making as it pertains to police work in general, and organisational learning in the context of police organisations in particular from the individual and organisational perspectives. The research will seek to answer the following fundamental questions:

RQ1 Are there individual differences in the use of intuitive (experiential) and analytical (rational) thinking (cognitive) styles amongst members of police organisations;

RQ2 Do senior managers use intuitive judgement in decision making, and under what circumstances do they use it;

RQ3 How effective are intuitive judgements perceived to be (for example, when does intuition 'hit', and when does it 'miss'?);

RQ4 Do 'good' and 'bad' intuitions become embedded within the organisation’s systems and structures, if so how, and what are the consequences;

RQ5 How does intuiting lead to organisational learning, and how can intuitions be capitalised upon as a source of organisational learning?
These questions form the basis of the two main studies in this research. In order to achieve the objectives of the research a plan is outlined in Table 5.1, also shown in Figure 5.1. The specific research questions referred to above are also stated in the table.

### Table 5.1 Summary of Research Methodology

<table>
<thead>
<tr>
<th>Levels</th>
<th>Approach Adopted</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research Philosophy</td>
<td>Pragmatism</td>
<td>Philosophical stance determined by research questions, offering a practical approach to integrate different perspectives for collection and interpretation of data</td>
</tr>
<tr>
<td>Research Choice and Approach</td>
<td>Mixed-methods (RQ1) and inductive (RQ2-5) approach</td>
<td>To deductively test hypotheses set out in Study 1, and inductively build on the theory (i.e. 4I framework) in Study 2</td>
</tr>
<tr>
<td>Research Strategy</td>
<td>Survey (RQ1)</td>
<td>Analytical survey strategy in Study 1 to collect data from a sample of police officers and police staff through a cross-sectional web-based self-administered questionnaire</td>
</tr>
<tr>
<td></td>
<td>Case study (RQ2-5)</td>
<td>Multiple, holistic approach in Study 2 to explore intuitive decision making as single unit of analysis in three police organisations</td>
</tr>
<tr>
<td>Research Method</td>
<td>Questionnaire (RQ1)</td>
<td>To use an established self-report inventory for the assessment of intuitive and analytical information processing styles in Study 1</td>
</tr>
<tr>
<td></td>
<td>Critical Incident Technique (RQ2-5)</td>
<td>To investigate retrospective accounts of senior managers' critical incidents of effective and ineffective intuitive decisions in Study 2</td>
</tr>
<tr>
<td>Data Collection Techniques</td>
<td>Rational Experiential Inventory (RQ1)</td>
<td>To assess individual differences in intuitive and analytical thinking styles amongst members of police organisations in Study 1</td>
</tr>
<tr>
<td></td>
<td>Focus group and individual interviews (RQ2-5)</td>
<td>To collect data from members of senior management teams in relation to their collective experiences of intuitive decision making processes in Study 2</td>
</tr>
<tr>
<td>Data Analysis Procedures</td>
<td>Statistical analysis (RQ1)</td>
<td>To use correlational and factor analyses, and draw descriptive and sub-group comparisons from the quantitative data in Study 1</td>
</tr>
<tr>
<td></td>
<td>Template analysis (RQ2-5)</td>
<td>To employ the 4I model as the underlying framework of Study 2, and qualitatively analyse the interview data</td>
</tr>
</tbody>
</table>
5.2 Research Philosophy

Research philosophy relates to the development of knowledge and the nature of that knowledge (Saunders, Lewis and Thornhill, 2007). Understanding of different philosophical positions is fundamental as the philosophy the researcher adopts contains important assumptions about the way in which they view the world. The ontological (the nature of reality) and epistemological (the best ways of inquiring into the nature of the world) assumptions will influence the research strategy and the methods chosen in the research process (Easterby-Smith, Thorpe and Lowe, 2002). In other words, beliefs about what is regarded as acceptable knowledge in a discipline will affect how the research will be carried out and the findings interpreted.

There is a wide array of philosophies in the literature of social science research, such as positivism, realism, pragmatism, interpretivism, objectivism, and constructionism (Saunders et al, 2007). Easterby-Smith et al (2002) stated that, although the
distinction between paradigms may be very clear at the philosophical level, it is not possible to identify any philosopher who ascribes to all aspects of one particular view. Especially in the management field many researchers deliberately combine methods drawn from different philosophical traditions because they are able to provide multiple perspectives on the phenomena being investigated.

In this respect, the philosophical foundation of the current research is based on pragmatism. The founders of this philosophical school of thought are Peirce (1839-1914), James (1842-1910), and Dewey (1859-1952). Pragmatism is a theory of meaning, which asserts that concepts are only relevant in as much as they are relevant for action. Building on this basic insight, pragmatism favours a reality that is in the making and a social model of knowledge (Kelemen and Rumens, 2008). This suggests that knowledge cannot be a mere individual achievement, but a social one, for the validity of a theory is assured when that theory makes sense to a certain community of practice. Groups are bound together by similar or shared experiences, and are able to reflect on new knowledge via dialogue and deliberation. Rorty (1982, cited in Johnson and Duberley, 2000) associates pragmatism exclusively with social construction where knowledge arises out of the language-games of a community of people which is incommensurable with that of other communities, and which cannot be judged by the standards of another community.

Researchers in this tradition do not necessarily recognise that a ‘reality’ exists independent of human thought and belief, however they recognise that people socially construct interpretations of reality (Tashakkori and Teddlie, 2003). In this respect, in a pragmatic paradigm of inquiry, knowledge is believed to derive from actions, situations and consequences (Creswell, 2003).

Pragmatism argues that the most important determinant of the research philosophy adopted is the research question, and as such one approach may be better than others for answering particular questions. In this regard, it is possible to work within both positivist and interpretivist positions. Pragmatism offers a practical approach integrating different perspectives to collect and interpret data; hence researchers are not constrained by research techniques and procedures. Accordingly, mixed-
methods, both qualitative and quantitative, are deemed possible and highly appropriate within one study (Saunders et al, 2007).

5.3 Research Choice and Approach

There are three approaches to research: quantitative, qualitative, and mixed-methods (Cresswell, 2003). Quantitative research aims to develop knowledge by identifying variables, testing textual research questions and theories which reflect the stances of positivism and post-positivism (Johnson and Onwuegbuzie, 2004). On the other hand, qualitative research has been defined by van Maanen (1983: 9) as “an array of interpretative techniques which seek to describe, decode, translate and otherwise come to terms with the meaning, not the frequency, of certain more or less naturally occurring phenomena in the social world”. According to Denzin and Lincoln (2000: 2) this means that “qualitative researchers study things in their natural settings, attempting to make sense of, or to interpret, phenomena in terms of the meanings people bring to them”. In recent years, this hard divide between the quantitative and qualitative methods has been broken down, and mixed-methods research is becoming increasingly recognised as the third major research approach (Johnson, Onwuegbuzie and Turner, 2007).

'Mixed-methods' is a general term for when both quantitative and qualitative data collection techniques and analysis procedures are used in a research design (Saunders et al, 2007). Philosophically, mixed-methods research adopts a pragmatic position, based on a view of knowledge as being both socially constructed and based upon the reality of the world we experience and live in (Johnson et al, 2007). Gray (2009) stated that in mixed-method research, quantitative and qualitative methods can be used focusing either on the same research question or different questions. In mixed-method research qualitative and quantitative data are collected either at the same time or one after the other, however these are not combined (Saunders et al, 2007). This means that although mixed-method research uses both quantitative and qualitative world views at the research methods stage, quantitative data are analysed quantitatively and qualitative data are analysed qualitatively. In addition, it is often
the case that quantitative or qualitative techniques and procedures predominate in a particular project.

In light of these discussions, the current research adopts a mixed-method approach, however the qualitative study predominates the thesis in terms of its scope. In this research, the mixed-method approach is used for the purpose of expansion, that is, to broaden and widen the range of the study (Greene, Caracelli and Graham, 1989). Accordingly, whilst the quantitative method is used to investigate the individual differences in intuitive and analytical information processing styles of police officers and police staff from an individual perspective (Study 1), the qualitative method is used to explore the decision making and learning processes in top management teams from an organisational perspective (Study 2).

This research makes use of both deduction (testing theories and hypotheses) and induction (identifying patterns). In this respect, Study 1 of research uses a self-report inventory to deductively test several hypotheses derived from the literature; Study 2 of research involves exploratory, qualitative framework through focus group interviews which deductively applies a theory adopted from the literature (i.e. 4I framework) to help towards the identification and classification of themes, and inductively builds on to the theory through the emerging concepts derived from the data.

5.4 Research Strategy

The adopted research strategies in this research are survey and case study. As mentioned in the previous section, in the current research quantitative and qualitative methods will be used in combination. This section focuses on presenting survey and case study strategies and their characteristics.

5.4.1 Survey

Surveys are usually associated with the deductive approach. They allow the collection of a large amount of data from a sizeable population. Surveys involve the
systematic collecting of data therefore standardisation is an important aspect of surveys (Gray, 2009). Surveys are usually exercises of measurement (often of attitudes) which attempt to identify something about a population, about which the researcher wishes to make generalisations (Gray, 2009). Gray (2009) explains that surveys fall into two main categories, i.e. analytical and descriptive. Analytical surveys take many of the features of experimental, deductive research and therefore place an emphasis on reliability of data, and statistical control of variables and sample size. The rigour of these controls is anticipated to allow for the generalisation of the results. On the other hand, descriptive surveys tend to use an inductive approach, often using open-ended questions to explore perspectives. In this respect, the quantitative study of the current research (Study 1) adopts an analytical survey strategy.

There are a number of data collection techniques that belong to the survey strategy, e.g. questionnaire, structured observation, structured interviews (Saunders et al, 2007). In Study 1 of this research, a cross-sectional web-based self-administered questionnaire is used (see Appendix 1 for the screen print of the online survey). Questionnaires are used to gather data from a defined group of individuals who answer identical questions where a rigid structure is necessary to produce numerical data for comparisons (Wilson and McLean, 1994). They are often used to establish patterns of associations and illustrate particular features identified in targeted audiences (Bryman, 2004). Questionnaires may have disadvantages such as sampling error when the sample is not representative of the whole population, and non-response or missing data which may reduce the response rates (Gray, 2009). However, they are generally identified with the advantages of simplicity, reliability and the capability to obtain large quantities of data. They are also relatively easier (compared to qualitative data) to code, analyse and interpret through the use of statistical software (Hair, Black, Babin, Anderson and Tatham, 2006).

5.4.2 Case Study

Yin (1994: 13) defined the case study as "...an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when... the
boundaries between phenomenon and context are not clearly evident". Accordingly, case studies explore subjects and issues where relationships may be ambiguous or uncertain. Yin (2003) suggested that the case study approach is ideal when a 'how' or 'why' question is being asked about a contemporary set of events to understand the dynamics present within a specific context over which the researcher has no control.

In terms of data collection, this method requires the use of multiple sources of evidence (Gray, 2009). Yin (2003) claimed that the case study approach can be used as both qualitatively and quantitatively, and include multiple methods such as interviews, focus groups, participant observations, and surveys (Hartley, 2004). Study 2 of this research adopts a qualitative multi-case study approach, and the data are collected through focus group interviews.

Yin (1994) pointed out that the case study approach has not been universally accepted by researchers as reliable, objective, and legitimate. One problem with case studies is that it is often difficult to generalise from a specific case. However, most scientific inquiries have to be replicated by multiple examples of the experiment, and case studies too can be based upon multiple cases of the same issue or phenomenon. Additionally, Yin (2003) argued that it is not the intent of case study research to claim generalisability; its purpose is to enhance our understanding of patterns and connections of theoretical importance rather than to conclude general findings from a sample to a population.

**Types of Case Studies**

Yin (2003) distinguished between four case study strategies based upon two dimensions requiring to decide whether the study will adopt a single case or multiple case designs, and whether the unit of analysis for the study will be holistic (single unit of analysis) or embedded (multiple units of analysis). The four main types of case study designs are shown in Figure 5.2.
Accordingly, in Type 1 only a single case is examined, and at a holistic level. The single case study should be chosen when it can play a significant role in testing a hypothesis or theory, or when the case study represents a unique or extreme case. Type 2 consists of a single case study with a number of different units of analysis. Type 3 is used where a multiple case study approach is needed but it is not possible to identify multiple units of analysis, therefore a more holistic approach is taken. Yin (1994) warns of a very serious danger of holistic design where the researcher may have begun the investigation on the basis of one set of questions, but the evidence from the case study may begin to address a very different set of questions. This problem may be reduced in Type 4 whereby embedded case studies involve multiple units of analysis. Usually this type of case studies is not limited to qualitative analysis alone, it allows for a multiplicity of methods that may be applied within the subunits (Scholz and Tietje, 2002).

In the current research, Type 3 case study design is adopted since the study involves multiple case studies with a holistic unit of analysis (i.e. decision making processes as single unit of analysis in multiple police organisations). The rationale for using multiple cases focuses upon the need to establish whether the findings of the first case occur in other cases and as a consequence the need to generalise from these
findings (Saunders et al, 2007). For this reason, Yin (2003) argues that multiple case studies may be preferable to a single case study.

**Evaluating the Quality of Case Study Research**

There is a list of quality standards within the case study research which the researchers must address. Yin (1994) highlights four aspects of the quality of case study design which are construct validity, internal validity, external validity and reliability.

Construct validity refers to the extent to which the results of the research fit the theory which was tested (Sekaran, 2003). Yin (2003) points out that construct validity is particularly problematic for qualitative case studies, due to the difficulty of defining the constructs being investigated. In order to increase the construct validity of this research, the researcher defined the concepts under investigation at the outset, conducted focus group interviews (i.e. multiple sources of key informants) for the investigation of the case studies, and used verbatim interview transcripts for the analysis of the data.

Internal validity refers to the establishment of causal relationship where the researcher is attempting to show whether event ‘x’ led to outcome ‘y’ (Gray, 2009). Saunders et al (2007) referred to internal validity in relation to the ability of the questionnaire to measure what the researcher intend it to measure. Yin (2003) suggested that internal validity is only suitable for explanatory and causal case studies. Since the purpose of Study 2 is not to establish causal relationships, internal validity is not relevant to this study.

External validity is sometimes referred to as generalisability, in the sense that the research results are equally applicable to other research settings (e.g. other organisations) (Saunders et al, 2007). This is particularly problematic if a single case study research is conducted. The external validity of this research is increased by undertaking a multi-case study approach in three police organisations. Whilst the
study is specific to the police domain, transferability of the findings is deemed to be feasible in terms of their broader implications on management practice in general.

Reliability refers to the extent to which data collection techniques or analysis procedures will yield consistent findings (Saunders et al, 2007). Conditions for reliability are met if the findings and conclusions of one researcher can be replicated by another researcher doing the same case study (Gray, 2009). In line with Yin’s (2003) recommendations, the researcher documented the data collection and analysis procedures, and additionally kept verbatim transcriptions of the interviews which would enable the replication of the same case studies by another researcher.

5.5 Research Method

In this research two different methods are used for the collection of the data: a questionnaire as part of the quantitative Study 1; and Critical Incident Technique as part of the qualitative Study 2. These methods are discussed in detail below.

5.5.1 Questionnaire

Study 1 of this research adopted an established self-report inventory, i.e. Rational Experiential Inventory, in order to assess the individual differences in intuitive and analytical information processing styles amongst the members of police organisations.

Self-report inventories emerged during the second half of the 20th century as the most widely used and studied method for assessing personality (Weiner and Craighead, 2010). Self-report inventory is a type of questionnaire which typically requires survey takers to respond to a series of statements (items) by indicating whether, or to what extent, the item describes some aspect of their functioning. The response format varies from a ‘true’ or ‘false’ to a Likert scale indication of degree of agreement with the statement as a self-description (Weiner and Craighead, 2010).
Numerous psychologically oriented self-report measures exist (e.g. questionnaires and rating scales), and they are most commonly designed to gather information about behaviours, personality traits, values, beliefs, and life experiences. In most respects, self-report is an indirect psychological assessment method, because no direct behavioural observation is made, instead individuals provide information about their subjective experience. In some cases, however, direct measurement of a phenomenon of interest is not feasible (Weiner and Craighead, 2010). For example, in the case of the current research, intuitive thinking style cannot be measured any more directly than by asking people to verbalise or report them. Thus, for phenomena such as thoughts, feelings and beliefs, self-report may be considered one of the most direct assessment methods available.

Although self-report measures are convenient and inexpensive, there are several disadvantages to consider when using this assessment method. Jensen and Haynes (1986) reported that the accuracy of data obtained from self-report measures can be compromised by such factors as social desirability, demand characteristics of the situation being assessed, subjective misperception of the items on the scale, reactive influences, response bias, and errors in the construction or application of measures. In addition, when questionnaires or rating scales are used, it is possible for individuals completing the self-rating scale to provide incomplete ratings. However, despite their limitations, self-report measures are widely used in psychology because they have the advantages of being economical, quantifiable, and easy to administer. More importantly, many self-report measures have published norms to aid in the interpretations of an individual’s scores. They also provide a means for assessing subjective or private phenomena (e.g. thoughts) that cannot be observed directly (Weiner and Craighead, 2010).

### 5.5.2 Critical Incident Technique

Study 2 of this research employed a variant of Critical Incident Technique (CIT) to explore senior managers’ most critical experiences whereby intuitive judgement was used in arriving at a decision and its effect on the decision outcome.
The CIT was proposed by Flanagan (1954: 327) who defined it as “a set of procedures for collecting direct observations of human behaviour in such a way as to facilitate their potential usefulness in solving practical problems and developing broad psychological principles”. By ‘incident’ Flanagan (1954) meant any observable human activity that is sufficiently complete in itself to permit inferences and predictions to be made about the person performing the act. To be ‘critical’ the incident must occur in a situation where the purpose or intent of the act seems fairly clear to the observer and where its consequences are sufficiently definite to leave little doubt concerning its effect. Another definition is offered by Chell (1998):

“The Critical Incident Technique is a qualitative interview procedure which facilitates the investigation of significant occurrences (events, incidents, processes, or issues) identified by the respondent, the way they are managed, and the outcomes in terms of perceived effects. The objective is to gain understanding of the incident from the perspective of the individual, taking into account cognitive, affective, and behavioural elements.” (Chell, 1998: 56)

A common attribute of CIT is that it elicits aspects of best and worst practices. Flanagan (1954) stated that the focus of a CIT study can range from studying effective and ineffective ways of doing something, to looking at helping and hindering factors, collecting functional or behavioural descriptions of events or problems, examining successes and failures, or determining characteristics that are critical to important aspects of an activity or event.

CIT is essentially a procedure for gathering certain important facts concerning behaviour in defined situations. Flanagan (1954) clearly stated that the CIT does not consist of a single rigid set of rules governing data collection. Rather, it should be thought of as a flexible set of principles that must be modified and adapted to meet the specific situation at hand.
Description of the CIT Research Method

As described by Flanagan (1954), the CIT has five main steps:

General aim of the activity: A basic condition in the first step of CIT is to create a functional description of an activity, determining the aim or objective of that activity, before any other aspect of the study could proceed. In its simplest form, the functional description of an activity specifies precisely what is necessary to do and not to do if participation in the activity is to be judged successful or effective.

Plans and specifications: At this stage, Flanagan (1954) advocated that precise instructions must be given to the observers to ensure that everybody is following the same set of rules. One of the primary aims of scientific techniques is to insure objectivity for the observations being made and reported. By having everyone work according to the same set of rules, Flanagan (1954) believed that objectivity could be achieved as well as consistency across observers. In most situations, the following specifications would need to be established and made explicit prior to collecting the data: defining the types of situations to be observed; determining the relevance of a specific incident to the general aim; understanding the extent of the effect the observed incident has on the general aim; deciding who will be making the observations.

Collecting the data: Data collection can be done in a number of ways, such as having expert observers watch people perform the task in question, or by having individuals report from memory about significant incidents that occurred in the past (Flanagan, 1954). A necessary condition for this phase is that the behaviours or results observed be evaluated, classified, and recorded while the facts are still fresh in the mind of the observer for accuracy. It is essential that the reporting be objective and include all relevant details. Flanagan (1954) suggested four ways of obtaining recalled data in the form of critical incidents: interviews, group interviews, questionnaires, and written record forms (recording details of incidents either in narrative form or by placing a check mark beside an activity on a pre-existing list of the most likely activities to be observed).
Related to data collection is also the concept of sample size. Flanagan (1954) stressed that in a CIT study the sample size is not determined by the number of participants, but rather by the number of critical incidents observed or reported, and whether the incidents represent adequate coverage of the activity being studied. There is no set rule for how many incidents are sufficient. The important thing is to ensure that the entire content domain of the activity in question has been captured and described.

**Analysing the data:** The purpose at this stage is to create a categorisation scheme that summarises and describes the data in an efficient manner so that it can be effectively used for various practical purposes. Formation of categories as a result of analysing the data is one of the hallmarks of the CIT. The aim is to increase the usefulness of the data while sacrificing as little as possible of their comprehensiveness, specificity, and validity. This necessitates navigating through three primary stages: determining the general frame of reference that will be most useful for describing the incidents; formulating the categories (an inductive process that involves insight, experience, and judgement); and determining the level of specificity or generality to be used in reporting the data.

**Interpreting and reporting:** In this stage, the data obtained needs interpretation if it is to be used properly. Flanagan (1954) maintains that it is not collecting the data which is most problematic but interpreting them and developing systems of classification. Flanagan (1954) suggested that researchers start by examining the previous four steps to determine what biases have been introduced by the procedures used and what decisions have been made. In order to avoid faulty inferences and generalisations, the limitations imposed must be brought into clear focus. Similarly, the degree of credibility and the value of the results should also be emphasised in the final reporting of the results. An important principle of CIT is that reporting should be limited to those behaviours which, according to competent observers, make a significant contribution to the activity.
Evaluating the Quality of CIT

Since Flanagan’s (1954) first conception of CIT, there have been major changes in the area of measures used by researchers to convince readers of the credibility of their research results. This is mainly due to the evolution of the CIT away from direct observation to retrospective self-report, and from task analysis to examining psychological concepts (Butterfield, Borgen, Amundson and Maglio, 2005). Clearly, by using the CIT for exploring personal experiences, psychological constructs, and emotions, the method has expanded beyond its original scope. In this respect, there appears to be a lack of literature regarding a standard or recommended way to establish the trustworthiness or credibility of the results in a CIT study. Because of this, many different and unrelated methods of establishing credibility have historically been in use. Some examples include triangulation, face validity, and inter-rater reliability (Skiba, 2000), peer checks and experts to examine the categories (Ellinger and Bostrom, 2002), and more extensive checks such as participant checks, intra-judge reliability, inter-judge reliability, category formation, and content analysis (Keaveney, 1995).

Two often-quoted studies were undertaken to examine the reliability and validity of the CIT method. The first study by Andersson and Nilsson (1964) looked at various reliability and validity aspects of the CIT method, including saturation and comprehensiveness, reliability of collecting procedures, categorisation control, and the centrality of the critical incidents to the subject matter. The authors concluded that “the information collected by this method is both reliable and valid” (Andersson and Nilsson, 1964: 402). A second study by Ronan and Lathan (1974) examined three reliability measures (inter-judge reliability, intra-observer reliability, and inter-observer reliability) and four validity measures (content validity, relevance, construct validity, and concurrent validity). Their study confirmed Andersson and Nilsson’s findings, stating “the reliability and content validity of the critical incident methodology are satisfactory” (1974: 61).

It should be noted that both of these studies examined the CIT within the context of its original task analysis role (i.e. analysis of how a task is accomplished by direct...
observation). Therefore, this raises the question of whether using the credibility and trustworthiness approaches from these two studies applies to new research that uses the CIT method for exploring issues that are not related to task analysis.

Between 1991 and 2003, a series of credibility checks has evolved that is consistent with Flanagan's (1954) original intent. Butterfield et al (2005) provided a detailed description of nine credibility checks offering them as a proposed protocol for researchers to follow when conducting a CIT study. These include: independent extraction of the critical incidents; participant cross-checking; independent judges placing incidents into categories; tracking the point at which exhaustiveness or redundancy is achieved; submitting the tentative categories that result from the data analysis to two or more experts in the field; participation rate; theoretical validity; descriptive validity; and interview fidelity.

Flanagan (1954) made one last suggestion in relation to the credibility of the findings. This has to do with the level of detail provided by the participant regarding a particular critical incident. He suggested that the accuracy of an incident could be deduced from the level of full, precise details given about the incident itself. This is something that should be considered by a CIT researcher before an incident is deemed appropriate for inclusion in the study. Flanagan (1954) suggested that general or vague descriptions of incidents might mean an incident is not well remembered and therefore should be excluded. The criteria for incidents to be included in a study are commonly thought to be: (1) they consist of antecedent information (what led up to it); (2) they contain a detailed description of the experience itself; and (3) they describe the outcome of the incident. Creswell (1998) suggested that when combined, these checks enhance the credibility of the findings as the research protocols consistent with the CIT method would be followed.

Justification for the Use of CIT

In this research, a variant of the CIT is adopted as it meets the objective of investigating top management's experiences of intuition in their decision making. The technique has been used by qualitative researchers to great effect, particularly in
conjunction with in-depth interviews (see Butterfield, Treviño and Ball, 1996; Isabella, 1990; Druskat and Wheeler, 2003; Pulakos, Arad, Donovan and Plamondon, 2000; Edvardsson, 1992; Gabbott and Hogg, 1996).

In investigating the role of intuitive judgements in decision making and organisational learning, the CIT provides a number of advantages:

(1) The CIT does not consist of a single rigid set of rules on data collection. This provides the researcher with flexibility to modify and adapt principles to meet the research objectives.

(2) The CIT is an inductive method that needs no hypotheses. Patterns are formed as they emerge from the responses allowing the researcher to generate concepts and theories (Olsen and Thomasson, 1992). However, the technique can also be used as a deductive method whereby the researcher may wish to test and extend an extant conceptual framework (Chell, 2004). Therefore, the CIT is suitable to deductively apply the 4I framework and inductively build on the theory.

(3) Focus is on critical events, incidents or factors that help promote or detract from the effective performance of some activity, or the experience of a specific situation. This feature of CIT fits best to investigate critical experiences of managers in their intuitive decision making.

(4) The focus of CIT study ranges from studying effective and ineffective ways of doing something, which fits the purpose of investigating managers’ decisions when the use of intuitive judgement has resulted in effective or ineffective outcomes.

(5) Participants are asked about specific events grounded in their real life experiences rather than for general information or conclusions. In this respect, the respondent accounts gathered when using this approach provide rich details of firsthand experiences. Participants are asked to report their own memory for specific events, therefore data stems directly from the participants’ actual
sequences of thought processes in their own words (Edvardsson, 1992). The CIT method therefore provides a rich source of data by allowing respondents to determine which incidents are the most relevant to them for the phenomenon being investigated, and provides the opportunity for the respondents to give a detailed account of their own experiences (Stauss and Weinlich, 1997). Therefore, the context is developed entirely from the respondent’s perspective and not forced into any given framework (e.g. scenarios) (Chell, 1998).

(6) A number of researchers (Martin, Feldman, Hatch and Sitkin, 1983; Mitroff and Kilman, 1975) have noted that allowing managers to tell stories about their experiences allows responses to be relatively unconstrained, compared to those obtained with quantitative research techniques. Thus, CIT offers a vehicle by which rich meanings and interpretations can be conveyed from managers to researchers.

(7) Data collection is primarily through interviews, either in person (individually or in groups) or via telephone. This provides the opportunity to interview managers individually as well as in groups to conform the nature of this research as it is set in the top management team context.

The qualities of CIT discussed above sets out the justification that it is the most appropriate method to adopt for the purposes of this research.

Limitations of the Method

Besides many advantages, CIT also has some limitations. For example, one might argue that phenomena like imperfect recall and attributional biases (i.e. any systematic distortion in inferring the causes of behaviour) on the part of the respondents may compromise the accuracy of managers’ retrospective accounts and perceptions of their intuitive incidents. It is important to use material that can be substantiated since there are criticisms of the technique relating to recall, and the natural tendency of individuals to use hindsight in rationalising the past (Easterby-Smith et al, 2002). The CIT method relies on events being remembered by
respondents and requires the accurate and truthful reporting of them. An incident may have taken place some time before the collection of the data, thus the subsequent description may lead the respondent to reinterpret the incident (Johnston, 1995). For this reason, Butterfield et al (1996) argued that the managers’ stories regarding critical incidents will evolve over time.

According to Butterfield et al (1996), because the same participants discuss both effective and ineffective incidents, the data are subject to self-serving bias (i.e. tendency to take credit for success but deny responsibility for failure) and contrast effects (i.e. enhancement or diminishment of perception and cognition as a result of experience of a comparison stimulus of lesser or greater value) which may compromise the accuracy of managers’ retrospective accounts and perceptions of their experiences. The concern was that if the participants were asked to choose only one incident to discuss, they would present only the effective ones. Therefore, to minimise this type of bias, in their CIT study the authors asked each participant to discuss both an effective and an ineffective incident. The contrast between the two represented important data which captured a wide range of incidents viewed as effective or ineffective by participants.

Finally, the method has been criticised on issues of reliability and validity (Edvardsson, 1992; Gabbott and Hogg, 1996). According to these authors, the main weakness is that the researcher can filter, misinterpret, or unconsciously misunderstand the respondent through the ambiguity of certain word meanings. Therefore, to obtain good validity in data collection, it is essential for the researcher to describe what is meant by critical incident, and to ask follow up questions to ensure the interviewee has given a comprehensive and detailed account of the incident in question (Edvardsson, 1992).

5.6 Research Design

This section presents the research design. In this research there are two main studies (Study 1 and Study 2), and one pilot study. The sample selection, data collection
techniques, and data analysis procedures undertaken in these studies are described in
detail below.

5.6.1 Study 1

The purpose of Study 1 is to address RQ 1 to assess the individual differences in
intuitive and analytical information processing styles in police organisations, using a
sample of police staff and police officers.

Sample Characteristics

The participants of this study consisted of police staff and police officers across
various job types and various ranks in two different police organisations (Police
Organisation A (POA) and Police Organisation C (POC))

2 The researcher obtained
access to these police organisations through professional contacts. In POA, the link
to the online questionnaire was emailed to the entire organisation by the Chief
Superintendent in order to provide a large sample of participants. In POC, a sample
of 100 people was chosen by the senior management team (SMT) across different job
levels and job types to participate in the survey, and only those people were given
access to the questionnaire. In total 752 participants attempted the online
questionnaire and 516 of those submitted the fully completed questionnaire
(representing 69%). Six participants were eliminated from the analysis (who were
Special Constables) as they did not belong to either the police staff or police officer
category, and the sample size was too small for a separate category. As a result, a
total of 510 participants represent the sample of this study (461 from POA, and 49
from POC).

The sample comprised of 178 police staff (35%) and 332 police officers (65%); and
190 female (37%) and 320 male (63%) participants. The sample of police officers (in
descending order of rank) comprised three Chief Superintendents, four
Superintendents, 10 Chief Inspectors, 47 Inspectors, 81 Sergeants, and 187 Police

2 These are the same organisations as represented in Study 2 of this research. Please note that the third
organisation (referred to as Police Organisation B (POB) in Study 2) has not participated in Study 1.
Constables. The sample of police staff occupied a wide variety of job types including intelligence, administration, and investigation.

**Data Collection Technique**

In this study, a self-report inventory i.e. Rational Experiential Inventory (REI) was used in the version developed by Pacini and Epstein (1999) which measures rational (analytical) and experiential (intuitive) information processing styles, and includes self-reported ability and engagement subscales.

Individual differences in preferences for analytical and intuitive processing have long been of interest to organisational psychology/behaviour researchers. Two rival theoretical traditions have vied for supremacy: the unitary perspective and the dual-process view. Within the unitary perspective, intuition and analysis are seen as opposite ends of a single dimension (Allinson and Hayes, 1996). On the other hand, within the dual perspective, intuition and analysis are seen as context-specific modes that are complementary facets of an underlying System1/System2 cognitive architecture (see Chapter 2). In this respect, in the management literature two well-known self-report instruments for the assessment of intuitive and analytical cognitive styles are the REI and the Cognitive Style Index (CSI, developed by Allinson and Hayes, 1996), each of which adopt a dual-process and unitary perspective respectively. Hence, the theoretical stances of these two instruments are opposing and incommensurable. This issue has engendered considerable debate (see Hodgkinson and Sadler-Smith, 2003a, 2003b).

Most recently, Hodgkinson et al (2009) evaluated the factor structure of the CSI using a five-point Likert response format, rather than the trichotomous format adopted by the test’s developers, which raised questions regarding the construct validity of this instrument. On the other hand, Hodgkinson et al (2009) found that the REI’s dimensionality (two uncorrelated factors, i.e. intuition and analysis) was consistent overall with the underlying dual-process theory of CEST (see Chapter 2) which the instrument was designed on.
Given the above argument and in keeping with the dual-process perspective as the underlying foundation of this research, REI is the preferred instrument for the assessment of individual differences in this research study. This 40-item instrument is a development of a previous version of the REI which is available in long- (31 items) and short- (10 items) forms (Epstein et al., 1996) (see Appendix 2 for the list of REI items). It consists of a total of 40 positively- and negatively-worded items in four scales: experiential ability (EA, 10 items), experiential engagement (EE, 10 items), rational ability (RA, 10 items), and rational engagement (RE, 10 items). The questionnaire was administered via an online survey in two police organisations (POA and POC) over a one-month period. The participants rated the questionnaire items on a five-point Likert scale that ranged from 1 (completely false) to 5 (completely true). In addition to the REI, participants were asked to answer a number of demographic questions such as age, gender, job level, job type, and length of experience as the basis for sub-group comparisons. Previous research has shown the REI to be free of problems relating to social desirability (Pacini and Epstein, 1999).

Data Analysis Procedure

Data analysis in Study 1 consisted of a three-stage process. In this study a number of hypotheses were derived from the relevant literature and the data were analysed to test the hypotheses using various statistical tests and procedures as implemented in the Statistical Package for the Social Sciences (SPSS 16.0), i.e. correlations, reliability analyses, Exploratory Factor Analysis (EFA) and sub-group comparisons. In addition, Confirmatory Factor Analysis (CFA) was conducted using AMOS 7.0.

The first two stages involved factor analysis. Generally speaking, factor analysis is used to analyse the structure of the interrelationships (correlations) among a large number of variables by defining a set of common underlying dimensions, known as factors (Hair, Anderson, Tatham and Black, 1998). Exploratory and confirmatory are the two major types of factor analysis. In EFA, the aim is to describe and summarise data by grouping together variables that are correlated. It is usually performed in the early stages of research when it provides a tool for consolidating variables and for generating hypotheses about underlying processes. CFA is a more sophisticated
technique used in the advanced stages of the research process to test a theory about latent processes (employing a variety of goodness-of-fit statistics). Thus, EFA is associated with theory development and CFA is associated with theory testing (Tabachnick and Fidell, 2007). The examination of factor loadings is the principal means of interpreting the role each variable plays in defining each factor. That is, factor loadings are the correlation of each variable and the factor, and they indicate the degree of correspondence between the variable and the factor, with higher loadings making the variable representative of the factor (Hair et al, 1998).

In the third stage, firstly descriptive analyses were used for computing frequency counts, percentages, mean scores and standard deviations, and reliabilities (Cronbach's alpha). For the sub-group comparisons, analysis of variance (ANOVA) was used to compare two or more means to see if there are any statistically significant differences among them. The differences between components were examined using the $F$-statistic. Internal consistency of the measurement scales were assessed using the Cronbach's alpha reliability test scores. Typically a scale is considered to be satisfactory if it exceeds the threshold value of 0.70 (Sekaran, 2003). Additionally, normality of variables was assessed, and the distributions were checked for skewness (symmetry) and kurtosis (peakedness) components of normality.

5.6.2 Pilot Study

The aim of the pilot study was to employ CIT in order to empirically test its usability in the main study (Study 2) as a qualitative tool for the investigation of intuitive decision making processes for the purposes of this research.

Sample Characteristics

The sample of this study has been recruited through professional contacts of the researcher. Accordingly, this study has been undertaken in collaboration with a UK-based management consultancy company who has kindly granted permission to contact their clients and faculty in order to conduct interviews. The sample was
deemed suitable for the pilot study as access was obtained to a group of highly experienced senior level decision makers. However, interviews were done on an individual basis since conducting focus group interviews with the management teams of the participants proved impossible due to clashing schedules and time constraints.

This study consisted of a sample of 13 participants in total. Six of them were the Managing Directors of different companies (the clients of the consultancy firm) -- three of which were also the owners of their respective companies. The remaining seven were the Executive Coaches/Directors in the consultancy firm (the faculty), all of whom also have strong backgrounds as Chief Executives. Participants comprised three females and 10 males.

The organisations in this study were mainly SMEs from a variety of business areas including manufacturing, publishing, financial services, and management consultancy. The participants’ responsibilities in their organisations primarily included strategy and business development and delivery, as well as other activities relating to the overall running of the company such as marketing, operations, finance, performance improvement, management and delivery of new programmes, and building relationships.

At the time of the interviews, all participants had been in their current positions for an average of 7.4 years (range: 2.5 to 20 years); average of 8.4 years as member of the top management team of their current organisations (range: six months to 25 years); average of 10.3 years in their current organisations (range: six months to 25 years); and average of 16.5 years in their respective industry (range: three to 36 years). Their educational background ranged from GCSE level to PhD (one GCSE level, five with Bachelor’s degree, four with Master’s degree, one with PhD degree, and two with professional qualification).

Data Collection Technique

In this study a variant of CIT (Flanagan, 1954) was employed. CIT is recognised as an effective exploratory and investigative tool (Chell, 1998; Edvardsson and Roos,
2001) which has been used widely in similar studies (Isabella, 1990; Druskat and Wheeler, 2003; van Dolen, Lemmink, Mattsson and Rhoen, 2001; Pulakos et al, 2000; Butterfield et al, 1996). In this study the level of analysis was the individual, in this respect an individual interview technique has been used to gather senior managers’ retrospective accounts of incidents in which they have employed intuitive judgements in making managerial decisions.

Each participant has been contacted in person a number of weeks in advance of the interview, and has been asked for informed consent to take part in and record all interviews. Some of the interviewees were sent the questions in advance of the interview as requested. Interviews were conducted on a one-to-one basis and were recorded with a digital recorder. Three of them took place face-to-face at the participants’ place of work. The remaining ten interviews were conducted over the phone for the convenience of the participants. On average, each interview took approximately 30 minutes.

The interview protocol was designed in three sections: demographic, exploratory, and critical incident questions (see Appendix 4 for the interview protocol for pilot study). In the first part of the interview, demographic details were asked in order to gather background information about the participants, such as responsibility in the organisation, tenure in the current position, tenure in the organisation, and tenure in the industry, as well as highest degree obtained. The second part consisted of four questions in relation to use of intuitive judgement in decision making. The objective of these questions was to investigate the role played by intuition, as well as factors and circumstances that influence the use of intuition in decision making.

In the final section of the interview, CIT has been used to gather information on two sets of questions. Each manager was asked to identify and describe two incidents in which intuition was used to make a strategic decision, one as having been effective (as having led to the results the manager desired) and the other as ineffective (as not having yielded the desired results). In designing the critical incident questions, a suggestion by Edvardsson and Roos (2001) has been taken into account which offers a basic model of ‘cause, course, and result’ as a fundamental interview guide.
Therefore, where needed, the questions were followed by asking further details such as the events that led up to the critical incident, the actions taken by the people involved, and the outcomes in terms of perceived effects.

In the final part of the interview, three participants had difficulty recalling incidents (particularly those with negative outcomes) during the interview. Two of the participants emailed the researcher with their answers after the interview, however the third participant could not come up with any examples relating to negative outcomes.

**Data Analysis Procedure**

In the pilot study a qualitative method has been used in analysing the data. The approach taken was consistent with the methodology used in previous and similar studies (e.g. Isabella, 1990; Butterfield et al, 1996; Sadler-Smith and Shefy, 2007). Qualitative data analysis is often regarded as both interpretive and eclectic in nature, and there is hardly a standardised approach to analyse it (Dey, 1993; Tesch, 1990). In this study, an inductive data analysis approach was favoured since it has been described as offering the opportunity for a good fit to develop between the social reality of the study informants and the theory that emerges (Saunders, Lewis and Thornhill, 2003).

The pilot study interviews were transcribed verbatim by the researcher, and the data from the interview transcripts were analysed by reading and re-reading the text in order to become familiar with the data. Due to the modest number of interviews, the data analysis was conducted manually by the researcher. In the next stage, in line with the CIT procedure (Flanagan, 1954), the researcher identified a set of concepts emerging from the data and created a categorisation scheme in accordance with the interview questions. The data were then grouped under labels (i.e. codes) when patterns started emerging between concepts, and were interpreted in light of the extant theory where applicable.
In regard to analysing qualitative data, Miles and Huberman (1994) stated that the process of coding is the analysis of the data, which involve how the researcher differentiate and combine the data retrieved, and reflections are made about this information. Codes are tags or labels for assigning units of meaning to the descriptive or inferential information compiled during a study. The authors suggested that codes are usually attached to chunks of varying size, words, phrases, sentences, or whole paragraphs, connected or unconnected to a specific setting.

In the first part, findings were reported in direct quotations from the interviews which were representative of the answers given to the interview questions. In the second part, participants’ stories of critical incidents were used to develop a typology based on the findings that emerged from the pilot study.

5.6.3 Study 2

The aim of Study 2 is to address RQ 2 to 5 by exploring the role of intuitive judgement in senior management decision making and organisational learning processes.

Sample Characteristics

The participants of Study 2 comprised the SMTs of three police organisations (POA, POB and POC) to whom access was secured through professional contacts of the researcher. This sample was suitable on the grounds that the purpose of this research was to investigate intuitive decision making in TMTs, and the senior police management teams provided an interesting context for study which has not been explored in previous research. Additionally, two more junior police officers (at POA) were interviewed given their involvement in one of the cases. The sample size was defined by the size of the SMTs in each organisation (typically group interviews involve between six and eight participants, Krueger and Casey, 2000). In total there were 23 participants: 11 in POA, six in POB, and six in POC. The sample included (in descending order of police rank): one Chief Constable, one Deputy Chief Constable, two Assistant Chief Constables, two Chief Superintendents, five
Superintendents, five Chief Inspectors, one Special Constable, one Sergeant, and one Police Constable. The sample also consisted of senior staff who were members of the SMTs: two Directors of HR, one Business Manager, and one Director of Finance. Participants comprised five females and 18 males.

At the time of the interviews, police officer participants had an average of 19.5 years of experience in the policing domain, ranging from four years (e.g. Police Constable) to 30 years. The management staff participants had an average of 12.7 years of experience, ranging from seven to 25 years in their specific domains of expertise (e.g. finance, HR).

**Data Collection Technique**

As tested in the pilot study, the CIT proved an efficient tool for investigating the retrospective accounts of senior managers’ intuitive decision making. In this study the level of analysis was the group (i.e. SMT), hence the CIT was employed in semi-structured focus group interviews. To the best of the researcher’s knowledge, the CIT has not been applied in a focus group setting in previous research. In this study, CIT was used together with Crossan et al’s (1999) 4I organisational learning model which set the framework of the interview questions (see Appendix 5 for the interview questions for Study 2).

King (2004a) stated that interviews remain the most common method of data gathering in qualitative research. Kvale (1983: 174) defined the qualitative research interview as “an interview, whose purpose is to gather descriptions of the life-world of the interviewee with respect to interpretation of the meaning of the described phenomena”. As Kvale (1996) noted, the aim of qualitative interviews should be to collect information, which captures the meaning and interpretation of phenomenon in relation to the interviewee’s world view.

According to King (2004a) focus group interviews are a valuable way of gaining insight into shared understandings and beliefs, which still allow individual differences of opinion to be voiced. One of the distinct features of focus group
interviews is its group dynamics, hence the type and range of data generated through
the social interaction of the group are often deeper and richer than those obtained
from one-to-one interviews. A dynamic group allows a variety of viewpoints to
emerge, and enables participants to hear the views and experiences of their peers
which may cause them to reflect back on their own experiences and thoughts. The
researcher is also likely to benefit from the opportunity that this method provides in
terms of interviewing a larger number of individuals than would be possible through
the use of one-to-one interviews (Saunders et al, 2007). Hedges (1985) highlighted
the lower cost and higher speed of obtaining maximised information through group
interviewing relative to individual interviews. However, he argued that group
interviewing can present several disadvantages, such as biased or constrained
participant responses due to social pressure by other group members.

Bloor, Frankland, Thomas and Robson (2001) referred to the chaotic nature of focus
groups. The authors suggested that the interactive effect of focus group interviews
results in data which may include instances where people talk at once, where
sentences remain unfinished, where people go on to contradict themselves and
others, where people’s arguments develop as they discuss the topic with others, and
where people misinterpret others’ comments and take the discussion off in another
direction.

In Study 2, prior to the interviews the participants were contacted in advance and a
mutually convenient day has been arranged for the focus group interviews. This
usually took place on the day of the senior management meeting to ensure attendance
of all the members of the SMT. The participants were asked for consent to record the
interviews. Data was collected over a four-month period and in total 16 interviews
(seven interviews with POA, four with POB, and five with POC) were conducted to
gather one incident of an ‘intuitive hit’ and one incident of an ‘intuitive miss’ from
each organisation. In total 14.5 hours of interview were conducted (six hours with
POA, three with POB, and five and a half with POC). It should be noted that whilst
at least two interviews (one to gather an ‘intuitive hit’ and one to gather an ‘intuitive
miss’) were conducted with the entire SMTs (except in the case of POB), where a
follow-up meeting was required, this took place either within smaller groups of the
members of the SMT or on an individual basis. This was due to the fact that group interviewing was difficult to organise since participants had different schedules. Additionally, not everyone in the SMT were involved in the reported incident to the same extent, therefore some individuals’ participation in the follow-up interviews was not required.

In the semi-structured focus group interviews the researcher had a list of questions to cover the themes as set out in the 4I framework, however the probing questions varied from interview to interview, and additional questions were required to further explore the incidents in different organisations. This depended on the level of detail the participants were already offering. The order of questions might also have been varied depending on the flow of the conversation.

**Data Analysis Procedure**

The interviews were transcribed verbatim by a professional touch typist. In order to manage and analyse the data collected systematically and rigorously the researcher used the template analysis procedure (King, 2004b). Template analysis refers to a varied group of techniques for thematically organising and analysing textual data. It combines a deductive and an inductive approach to qualitative analysis (Saunders et al, 2007). This quality was an important consideration for choosing template analysis over grounded theory which uses a purely inductive analytical approach (King, 2004b; Saunders et al, 2007).

In this respect, King (2004b) explains that the essence of template analysis is that the researcher produces a list of codes (i.e. template) representing themes identified in the textual data. Some of these will usually be defined a priori, derived deductively from the extant literature and theory (Saunders et al, 2007), but they will be modified and added to as the researcher reads and interprets the texts. Accordingly, in Study 2 the four organisational learning processes in the 4I framework (i.e. intuiting, interpreting, integrating, and institutionalising) were used as the predetermined template. The template was organised in a way to represent the relationship between themes in a hierarchical structure (King, 2004b) whereby the 4I framework served as
higher-order codes, and the lower-order codes were derived inductively from the interview data. According to King (2004b), the greatest advantage of template analysis is that it is a highly flexible technique with only few specified procedures, permitting researchers to tailor it to match their own requirements. The discipline of producing the template forces the researcher to take a well-structured approach to handling the data and create an organised final account of a study (King, 2004b).

Template analysis might be carried out with the use of Computer Aided Qualitative Data Analysis Software (CAQDAS, e.g. NVivo) which generally help with the thematic analysis of the data, and enable the researcher to index segments of text to particular themes (King, 2004b). It is most useful in terms of the speed in sorting or searching data through large number of transcripts, and a particular advantage is in identifying patterns within or between data sets. Easterby-Smith, Thorpe and Jackson (2008) suggested that if the data set is relatively small (for example, fewer than 20 interviews) then these data sets may still be best understood and analysed through the older methods of multi-coloured highlighting pens and close reading on screen or paper. At the initial stage of the data analysis, the researcher attempted to use NVivo, however the unstructured nature of the data proved difficult to use this software to examine the data. Additionally, it was the personal preference of the researcher to do the coding on paper whereby she felt more immersed into the analysing process of the data. The manually coded sections of text was then copied from the transcripts (in the Word document) and pasted into a new Word document under higher- and lower-order codes.

The text from the interview transcripts were analysed and coded in a three-stage procedure. In the first stage of unitising, the researcher familiarised herself with the data by reading and re-reading the transcripts several times in order to identify individual ‘thought units’ (Gioia and Sims, 1986). Initially, the researcher identified sections of text which were relevant to the 4I processes and marked them with appropriate code from the initial template. Over the course of the analysis, where the researcher identified a recurring issue in the text of relevance to the research question, but not covered by an existing code, she added a new higher-order code.
Thought units ranged from a phrase, through a complete sentence, to several sentences with the aim to capture a complete thought or idea. The thought units that were relevant to the questions on the interview protocol were recorded. The only material excluded was what could be called ‘side tracks’. Below is an example of a side track which does not relate to the interview question or the interview topic in general.

“I’m quite passionate about trying to police the football, and getting the football policing right. Now football policing right is a balance between being very firm, direct policing, and then very community style apologetic almost policing, and in an ideal world I’d have a police officer one way who’s surrounding the fans, telling the fans exactly what they’re doing...” [Participant F, Intuitive Hit Case 1]

Once the initial coding process was complete, the researcher worked systematically through the full set of transcripts. In the second stage of categorising, all of the thought units were organised into emergent categories or themes within the higher-order codes, whereby groups of similar themes were clustered together to produce the lower-order codes. The lower-order codes were derived from the interview data inductively. Given the exploratory nature of this research, the themes were allowed to emerge from the data through a process of re-reading and interpreting the thought units. These were then revised in light of the ongoing analysis. The goal was to minimise differences between thought units within a category and maximise differences between thought units in different categories.

In the third stage of classifying, the emergent categories were grouped into unifying themes. The researcher continued to work with the data until it was exhaustive and no other categories emerged, also until it was felt satisfactory for meaningful exploration of the emerging themes, patterns and relationships.

The three-stage analysing process was repeated several times by the researcher. At the point when the researcher felt comfortable with the categorisation of the data under the main categories (higher-order) and sub-categories (lower-order), the process was repeated one last time for the purpose of measuring the intra-coder reliability. Reliability of the coding was calculated using a method suggested by
Miles and Huberman (1994) which involves dividing the number of agreements by the total number of agreements plus disagreements. Miles and Huberman (1994) suggest that both intra- and inter-coder agreement should be in the 90% range.

Accordingly, at the initial stage a total of 783 thought units were identified; and in the final process the researcher found agreement on 708 thought units, representing an intra-coder reliability of 90.4%. As a result of this, the researcher further refined the thought units by re-placing some of the thought units under different sub-categories and deleting those which were not directly relevant to the story emerging from the data. Additionally, 25% of the data (195 thought units) were checked by a second coder for the purpose of inter-coder reliability. There was agreement on 174 thought units, representing 89.2% reliability. Both intra- and inter-coder reliabilities could be said to be satisfactory.

In total five higher-order codes (four deductively and one inductively), and 34 lower-order codes (all inductively) were identified from the interview data within the ‘organisational learning processes’. Two additional lower-order codes were identified (grouped under the higher-order code of ‘post-decision processes’) which were in effect reflections of the participants on the subject; these were treated separately from the ‘organisational learning processes’ as they were not part of the 4I framework.

5.7 Conclusion

This chapter outlined the research methodology underpinning this thesis, addressing the research objectives, philosophical position, research choice and approach, research strategy, and methods. The chapter also described the research design by demonstrating the sample characteristics, data collection techniques, and data analysis procedures undertaken in two main studies and one pilot study. Accordingly, Study 1 assessed individual differences in intuitive and analytical thinking styles amongst the members of the police organisations via the use of self-reported REI, thereby addressing RQ 1. The pilot study was employed with a sample of executives in order to examine the suitability of the CIT method for use in the main qualitative
study. Study 2 used CIT in focus groups together with the 4I model as the underlying framework of this research in order to explore the TMT intuitive decision making and organisational learning processes from a collective perspective, thereby addressing RQ 2 to 5.

The remainder of this thesis presents the analyses of these studies respectively and the discussion of the findings.
Chapter 6  Study 1: Intuitive & Analytical Thinking Styles

6.0 Introduction

This chapter presents Study 1, the analyses and findings of the data collected from the online survey conducted at two police organisations in the UK. In this study the Rational Experiential Inventory (Pacini and Epstein, 1999), a self-report inventory for measuring rational and experiential thinking styles, has been employed with the aim to explore the individual differences in intuitive and analytical thinking styles (sometimes referred to as information processing or cognitive styles) in police work, using a sample of police staff and police officers.

The chapter is organised as follows: the first section presents the method used in this study describing the sample, measures and procedure. The second section consists of three parts and presents the analyses employed: the first two parts present the factor analyses, namely Exploratory Factor Analysis and Confirmatory Factor Analysis respectively, and the third part presents the descriptive statistics and sub-group comparisons. The following section presents the results of the analyses and finally the chapter is concluded with the discussion of the findings.

6.1 Method

This section reports on the participants of the study, measures used for data collection, and the procedure of the data analysis.

6.1.1 Participants

In this study, the self-report inventory was administered via an online survey in two police organisations in the UK (Police Organisations A and Police Organisation C). The participants consisted of police staff in various job types and police officers of various ranks across the two organisations. In total 752 participants attempted the online survey and 516 of those submitted the fully completed questionnaire.
Six participants, who were Special Constables, were eliminated as they did not belong to either the police staff or police officer categories, and the sample size was too small for a separate category. As a result, a total of 510 usable responses were received (461 from POA, and 49 from POC).

6.1.2 Measures

In this study the Rational Experiential Inventory (REI) was used in the version developed by Pacini and Epstein (1999) which measures rational and experiential (i.e. intuitive) thinking styles, and includes self-reported ability and engagement subscales. This 40-item self-report inventory (see Weiner and Craighead, 2010) is a development of a previous version of the REI which is available in long- (31 items) and short- (10 items) forms (Epstein et al, 1996) and in which no ability and engagement distinctions within the main scales was made. It consists of a total of 40 positively- and negatively-worded items in four scales: experiential ability (EA, 10 items), experiential engagement (EE, 10 items), rational ability (RA, 10 items), and rational engagement (RE, 10 items). Descriptions of the four scales are provided in Table 6.1 below.

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>EA</td>
<td>High level of ability with respect to one’s intuitive impressions and feelings (e.g. “When it comes to trusting people I can usually rely on my gut feelings”)</td>
</tr>
<tr>
<td>EE</td>
<td>Reliance on and enjoyment of feelings and intuitions in making decisions (e.g. “I like to rely on my intuitive impressions”)</td>
</tr>
<tr>
<td>RA</td>
<td>High level of ability to think logically and analytically (e.g. “I have no problem thinking things through carefully”)</td>
</tr>
<tr>
<td>RE</td>
<td>Reliance on and enjoyment of thinking in an analytical, logical manner (e.g. “I enjoy thinking in abstract terms”)</td>
</tr>
</tbody>
</table>

Source: Pacini and Epstein, 1999
The participants rated the questionnaire items on a five-point Likert scale that ranged from 1 (completely false) to 5 (completely true) (see Appendix 1 for the screen print of the survey, and Appendix 2 for the list of REI items). In addition to the REI, participants were asked to answer a number of demographic questions, i.e. age, gender, job level, job type, and length of experience, as the basis for sub-group comparisons.

6.1.3 Procedure

Data were analysed using SPSS 16.0 for conducting EFA and sub-group comparisons; and AMOS 7.0 for conducting CFA. For factor analyses the full sample was split randomly into Sample A (EFA, \(N = 350\)) and Sample B (CFA, \(N = 160\)); sub-group comparisons were based on data from one organisation only (POA, \(N = 461\)). The sample was split in this study on the grounds that: (1) 160 is an optimum sample size for CFA (see Hodgkinson and Sadler-Smith, 2003a); (2) a sample size of 300 for an EFA was deemed by Comrey and Lee (1992) as 'good'. It should be noted that there were no statistically significant differences in responses to the study variables between POA and POC.

6.2 Analyses

This section reports on the analyses of data, i.e. EFA, CFA, and descriptive statistics and sub-group comparisons respectively.

6.2.1 Exploratory Factor Analyses

In the EFA, the methods of previous researchers (i.e. Pacini and Epstein, 1999; Hodgkinson et al, 2009) have been followed in an attempt to replicate and test the veracity of their findings.

In order to "confirm" the distribution of the items of the rationality and experientiality main scales, Pacini and Epstein (1999: 975) gathered data from student participants (American psychology majors). They entered the 40 REI items
into a Principal Components Analysis (PCA), extracted two components (no empirical grounds for so doing were given) accounting for 34.0% of the variance, and rotated to simple structure using an orthogonal (i.e. Varimax) rotation. All rationality items loaded on the first component, and experientiality items loaded on the second. Pacini and Epstein (1999: 975) further used PCA to examine the ability/engagement distinction in the REI’s sub-scales by forcing “a two factor solution” on the experientiality and the rationality items: in their analysis the rationality items divided into ability and engagement; the experientiality items divided into positively- and negatively-worded items.

Similarly, Hodgkinson et al (2009: 344) again using data gathered from student participants (Australian under-graduates in a variety of disciplines), entered the 40 REI items into a PCA, however rather than “a priori forcing” a two-component solution on the data, they used Cattell’s scree test (1966) to identify the number of factors for extraction. They identified three components that accounted for 37.6% of the variance, and rotated these to simple structure using Varimax procedure. All of the rationality items loaded on the first component, and the experientiality items loaded on the second and third components: the positively-worded experientiality items loaded on component two while the negatively-worded experientiality items loaded on component three.

In light of the review of the literature reported in Chapter 2 and these two previous studies, the following hypotheses are proposed:

H₁ Rationality and experientiality scales will not be correlated, i.e. intuition and analysis will be independent (consistent with dual-process theory)

H₂ Rational engagement and rational ability subscales will emerge as separate factors (as theorised by Pacini and Epstein, 1999)

H₃ Negatively-worded experientiality and positively-worded experientiality items will emerge as separate factors (contrary to the theoretical expectations of Pacini and Epstein, 1999, but as observed by Hodgkinson et al, 2009)
Consistent with the previous studies, to examine the construct validity of the measure the 40 REI items were entered into a PCA in order to ascertain the suitability of the dataset for performing EFA procedures. The Kaiser-Meyer-Olkin measure of sampling adequacy was .871 and the Bartlett’s test of sphericity was 4353.7, significant at $p < .001$, thus confirming that the dataset was suitable for performing EFA.

PCA revealed that there were nine components with eigenvalues greater than one (accounting for 54.6% of the variance). Inspection of the scree plot in accordance with the guidelines of Cattell (1966) showed the ‘elbow’ to be at component three. Given that the eigenvalue-greater-than-one rule may over-estimate the number of components to be extracted and that the scree test has been found to perform consistently better (Ford, MacCallum and Tait, 1986), two components accounting for 31.1% of the variance (component one 18.9%; component two 12.2%) were extracted. This is also in keeping with Pacini and Epstein’s (1999) ‘forced fit’ two factor solution (but is empirically- rather than theoretically-driven).

Two alternative methods of rotation were considered: orthogonal and oblique rotation. Tabachnick and Fidell (1996) suggest that the best way to decide between orthogonal and oblique rotation is to initially request an oblique rotation and examine the degree of correlation among the resulting factors (components). Tabachnick and Fidell (1996) argue that an oblique rotation is warranted in cases where this yields correlations of $\pm .32$ or greater. In consistence with the expectation that rationality and experientiality factors would not be correlated, the Direct Oblimin method (an oblique method of rotation) revealed a low value of $r = .138$ suggesting no correlation between these two scales, hence supporting $H_1$. As a result the two factors were rotated to simple structure using the Varimax method of rotation.

Hair et al (1998) suggested a criterion of salient loading of .30 for a sample size of 350 or greater. In this respect, inspection of the rotated component matrix revealed component one to be comprised of experientiality items, and component two of rationality items. There were two cross-loading items (EA items 7 and 10) and three items which failed to load at the salient level (RE items 8, 9 and 10). The
communalities for each variable are provided, representing the amount of variance accounted for by the factor solution for each variable (Hair et al., 1998). Extracted communalities of the variables ranged from .033 (RE item 10) to .567 (EA item 8).

On the basis of PCA the results are consistent with Pacini and Epstein (1999: 975) (i.e. two factors, “rationality and experientiality [which] are independent and orthogonal”) rather than with Hodgkinson et al (2009: 344) (i.e. “one rationality and two experientiality factors [positively- and negatively-worded]”). The matrix of factor loadings for 40 items (with values of greater than .30 underlined) and communalities is shown in Table 6.2.

In order to test for H₂ (suggesting that rational engagement and rational ability subscales would emerge as separate factors) the researcher followed the procedure described by Pacini and Epstein (1999), i.e. entered the rationality items only into the PCA, and extracted two factors and rotated to simple structure using the Direct Oblimin method. In support of the H₂, it is observed from the pattern matrix that the rationality items divided – but not cleanly – into engagement and ability components respectively. There were three cross-loading items (RA items 2 and 8, and RE item 4) and two items failed to load at the salient level of .30 (RE items 9 and 10). It is also observed that RA items 1 and 4 loaded on the engagement component instead of loading on the ability component. Extracted communalities of the variables ranged from .061 (RE item 9) to .552 (RE item 6). The matrix of factor loadings for rationality items (with values of greater than .30 underlined) and communalities is shown in Table 6.3.

The procedure as described above was repeated for experientiality items in order to test H₃ (suggesting that the negatively-worded experientiality and positively-worded experientiality items would emerge as separate factors). In support of this hypothesis, it is observed in the pattern matrix that experientiality items divided into positively- and negatively-worded components, with two items (EE item 2 and EA item 8) cross-loading. Extracted communalities of the variables ranged from .297 (EE item 10) to .569 (EA item 8). The matrix of factor loadings for experientiality items (with values of greater than .30 underlined) and communalities is shown in Table 6.4.
Table 6.2 Matrix of Factor Loadings for REI Exploratory Factor Analysis

<table>
<thead>
<tr>
<th></th>
<th>Component 1</th>
<th>Component 2</th>
<th>$h^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>EE01</td>
<td>.604</td>
<td>.046</td>
<td>.367</td>
</tr>
<tr>
<td>RA01NEG</td>
<td>-.093</td>
<td>.557</td>
<td>.319</td>
</tr>
<tr>
<td>EA01</td>
<td>.616</td>
<td>.054</td>
<td>.382</td>
</tr>
<tr>
<td>RA02NEG</td>
<td>.043</td>
<td>.673</td>
<td>.455</td>
</tr>
<tr>
<td>EE02</td>
<td>.679</td>
<td>-.048</td>
<td>.463</td>
</tr>
<tr>
<td>RE01</td>
<td>.110</td>
<td>-.566</td>
<td>.332</td>
</tr>
<tr>
<td>EA02</td>
<td>.550</td>
<td>.019</td>
<td>.303</td>
</tr>
<tr>
<td>RA03NEG</td>
<td>.022</td>
<td>.576</td>
<td>.332</td>
</tr>
<tr>
<td>EA03NEG</td>
<td>-.555</td>
<td>.112</td>
<td>.318</td>
</tr>
<tr>
<td>RE02</td>
<td>.023</td>
<td>-.431</td>
<td>.187</td>
</tr>
<tr>
<td>EE03</td>
<td>.555</td>
<td>-.078</td>
<td>.314</td>
</tr>
<tr>
<td>RA04NEG</td>
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<td>.228</td>
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<td>.355</td>
</tr>
<tr>
<td>RA05</td>
<td>.016</td>
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<td>.196</td>
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<tr>
<td>EA04</td>
<td>.549</td>
<td>-.087</td>
<td>.309</td>
</tr>
<tr>
<td>EE05NEG</td>
<td>-.431</td>
<td>.210</td>
<td>.230</td>
</tr>
<tr>
<td>RA06</td>
<td>.021</td>
<td>-.393</td>
<td>.155</td>
</tr>
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<td>.233</td>
<td>.199</td>
</tr>
<tr>
<td>EA05</td>
<td>.580</td>
<td>-.008</td>
<td>.336</td>
</tr>
<tr>
<td>EA06NEG</td>
<td>-.558</td>
<td>.223</td>
<td>.361</td>
</tr>
<tr>
<td>RE07</td>
<td>-.051</td>
<td>-.350</td>
<td>.125</td>
</tr>
<tr>
<td>RE03NEG</td>
<td>-.049</td>
<td>.676</td>
<td>.459</td>
</tr>
<tr>
<td>EA07NEG</td>
<td>-.526</td>
<td>.370</td>
<td>.414</td>
</tr>
<tr>
<td>RE04</td>
<td>.077</td>
<td>-.671</td>
<td>.456</td>
</tr>
<tr>
<td>EA08</td>
<td>.749</td>
<td>-.071</td>
<td>.567</td>
</tr>
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</tr>
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<td>EE07</td>
<td>.655</td>
<td>.087</td>
<td>.437</td>
</tr>
<tr>
<td>RE06NEG</td>
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<td>.439</td>
</tr>
<tr>
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<tr>
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<td>.344</td>
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</tr>
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<td>.489</td>
<td>.255</td>
</tr>
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<td>EE09NEG</td>
<td>-.583</td>
<td>.092</td>
<td>.349</td>
</tr>
<tr>
<td>RA09</td>
<td>.012</td>
<td>-.512</td>
<td>.262</td>
</tr>
<tr>
<td>EE10NEG</td>
<td>-.553</td>
<td>-.018</td>
<td>.306</td>
</tr>
<tr>
<td>RE08</td>
<td>.049</td>
<td>-.258</td>
<td>.069</td>
</tr>
<tr>
<td>EA10NEG</td>
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<td>RA10</td>
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</tr>
<tr>
<td>RE10</td>
<td>.037</td>
<td>-.177</td>
<td>.033</td>
</tr>
</tbody>
</table>
Table 6.3 Matrix of Factor Loadings for REI EFA Rationality Items Only (Pattern Matrix)

<table>
<thead>
<tr>
<th>Component</th>
<th>1</th>
<th>2</th>
<th>$h^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>RA01NEG</td>
<td>.440</td>
<td>-.231</td>
<td>.321</td>
</tr>
<tr>
<td>RA02NEG</td>
<td>.383</td>
<td>-.438</td>
<td>.460</td>
</tr>
<tr>
<td>RE01</td>
<td>-.553</td>
<td>.120</td>
<td>.368</td>
</tr>
<tr>
<td>RA03NEG</td>
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<td>-.474</td>
<td>.371</td>
</tr>
<tr>
<td>RE02</td>
<td>-.524</td>
<td>-.020</td>
<td>.268</td>
</tr>
<tr>
<td>RA04NEG</td>
<td>.386</td>
<td>-.130</td>
<td>.202</td>
</tr>
<tr>
<td>RA05</td>
<td>.057</td>
<td>.665</td>
<td>.417</td>
</tr>
<tr>
<td>RA06</td>
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<td>.371</td>
</tr>
<tr>
<td>RE03NEG</td>
<td>.591</td>
<td>-.205</td>
<td>.480</td>
</tr>
<tr>
<td>RE04</td>
<td>-.496</td>
<td>.327</td>
<td>.471</td>
</tr>
<tr>
<td>RE05NEG</td>
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</tr>
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<td>.736</td>
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<td>.552</td>
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<td>RA08NEG</td>
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<td>.342</td>
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<tr>
<td>RE07NEG</td>
<td>.432</td>
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</tr>
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<td>RE08</td>
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<td>-.258</td>
<td>.249</td>
</tr>
<tr>
<td>RA10</td>
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<td>.596</td>
<td>.371</td>
</tr>
<tr>
<td>RE09NEG</td>
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<td>.061</td>
</tr>
<tr>
<td>RE10</td>
<td>-.285</td>
<td>-.058</td>
<td>.073</td>
</tr>
</tbody>
</table>

Although the PCA of all 40 REI items failed to replicate Hodgkinson et al’s (2009) findings (i.e. three components), in common with these researchers no support was found for Pacini and Epstein’s (1999) four-component (i.e. theoretical) interpretation. In following Pacini and Epstein’s (1999) method, the findings show clear evidence of the empirically-observed division between positively- and negatively-worded items for experientiality rather than experiential ability/engagement. These results corroborate previous findings and cast further doubt on the validity of the ability/engagement distinction for experientiality.
### Table 6.4 Matrix of Factor Loadings for REI EFA Experientiality Items Only (Pattern Matrix)

<table>
<thead>
<tr>
<th></th>
<th>Component 1</th>
<th>Component 2</th>
<th>$h^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>EE01</td>
<td>.453</td>
<td>-.230</td>
<td>.351</td>
</tr>
<tr>
<td>EA01</td>
<td>.589</td>
<td>-.108</td>
<td>.416</td>
</tr>
<tr>
<td>EE02</td>
<td>.466</td>
<td>-.331</td>
<td>.466</td>
</tr>
<tr>
<td>EA02</td>
<td>.596</td>
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<td>EA03NEG</td>
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<tr>
<td>EE03</td>
<td>.444</td>
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<td>.328</td>
</tr>
<tr>
<td>EE04NEG</td>
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<td>.600</td>
<td>.429</td>
</tr>
<tr>
<td>EA04</td>
<td>.480</td>
<td>-.170</td>
<td>.332</td>
</tr>
<tr>
<td>EE05NEG</td>
<td>.164</td>
<td>.728</td>
<td>.449</td>
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<td>EE06</td>
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<td>EA08</td>
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<td>EA09</td>
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<td>EE08NEG</td>
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</tr>
<tr>
<td>EE10NEG</td>
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<td>.297</td>
</tr>
<tr>
<td>EA10NEG</td>
<td>.091</td>
<td>.609</td>
<td>.329</td>
</tr>
</tbody>
</table>

### 6.2.2 Confirmatory Factor Analyses

Neither Pacini and Epstein (1999) nor Hodgkinson et al (2009) deployed CFA in their construct validation of the REI (long-form). However, the CFA is particularly useful in the validation of scales for the measurement of previously specified constructs, therefore the researcher opted to use CFA as implemented in Amos 7.0 in order to test the following competing models (see Table 6.5, ‘L’ indicates long-form REI, the relevant path diagrams are to be found in Appendix 3).

1. Model 1 (two factors, L₂): experientiality (E); rationality (R);
2. Model 2 (three factors, L₃.₁): E; rational engagement (RE) and rational ability (RA) (i.e. empirically-derived, Pacini and Epstein, 1999);
(3) Model 3 (three factors, L₃2): experientiality positively-worded (EP) and experientiality negatively-worded (EN); R (i.e. empirically-derived, Hodgkinson et al, 2009);

(4) Model 4 (four factors, L₄1): experiential engagement (EE) and experiential ability (EA); RE and RA (i.e. theoretically derived, Pacini and Epstein, 1999);

(5) Model 5 (four factors, L₄2): EP and EN; RE and RA (i.e. Pacini and Epstein, 1999 but retaining the distinction between positively- and negatively-worded experientiality items).

In assessing model fit, as well as $\chi^2$ (sensitive to sample size), a range of other measures has been used (for baseline comparisons, Goodness of Fit Index [GFI], and Incremental Fit Index [IFI, non-normed, not constrained to upper limit of 1]; for insensitivity to sample size, Root Mean Square Error of Approximation [RMSEA]). The following has been accepted as indicators of goodness of fit: $\chi^2$/df < 2.00; fit indices $\geq .90$ (some researchers report fit indices $>.85$ as generally acceptable, see Hinkin, 1995); RMSEA < .08. The researcher further tested the fit of these data to one-factor (unitary, S₁) and two-factor (dual, S₂) models based on the responses to the 10-item REI short-form (Epstein et al, 1996) (five RE and five EA items). Table 6.5 presents the fit indices for the various models.

Intuition researchers working within a dual-process paradigm and wishing to adopt a more nuanced interpretation of the REI are confronted by a number of choices. The best-fitting model to the data in this study was Model L₄2 (EN, EP, RE, and RA). However, since EN/EP is not a psychologically (as opposed to psychometrically) meaningful distinction to adopt, and given that EFA and CFA results suggest the RE and RA distinction is worth retaining, the sensible conclusion to be drawn from these data is that Model L₃1 ought to be the model and scoring method of choice for the REI. This conclusion is drawn with the important caveat that, although they exceeded the requirements of $\chi^2$/df and RMSEA, none of the baseline comparisons (i.e. GFI and IFI) met the .90 criterion of fit for these indices. However, as may be seen from Table 6.5, the REI short-form when scored as two factors (as recommended by Pacini and Epstein, 1999) has fit indices which exceed the .90
threshold. On this basis, the short-form REI is recommended as an instrument of choice for the assessment of individual differences in rational and experiential processing. For the purposes of further analysis Model $L_{3.1}$ is retained.

6.2.3 Descriptive Statistics and Sub-Group Comparisons

As stated in the beginning of this chapter, in descriptive statistics and sub-group comparisons only the data from POA have been used ($N = 461$). The data comprised of police staff ($N = 163$, 35.4%) and police officers ($N = 298$, 64.6%), and 171 female (37.1%) and 290 male (62.9%) participants. The age of the participants ranged from 20 to 66 (average age was 42 years). The length of experience ranged from two months to 46 years and eight months (average of 14 years of experience).

The police officers were categorised into four groups based on their job level as follows: Police Constable ($N = 176$), Sergeant ($N = 76$), Inspector ($N = 34$), and SMT ($N = 12$). The ranks above the Inspector (i.e. Chief Inspectors, Superintendents and Chief Superintendent) were categorised under one group, the SMT, as the number of sample was smaller in higher ranks.

The police staff were categorised according to their job type, as follows: administrative ($N = 83$), intelligence ($N = 55$), and community support ($N = 16$). It should be noted that the intelligence and community support roles consisted of police staff as well as police officers. In order to avoid duplication of data (as police officers were categorised by their rank), the sample in these job types included only the police staff; the police officers were excluded.

Although there is a general perception of intuitive style of being stereotypical of females, in previous research Sadler-Smith (2011), Hayes, Allinson and Armstrong (2004), and Hodgkinson and Sadler-Smith (2003a) failed to confirm this perception. In addition, Hodgkinson and Sadler-Smith (2003a) found that higher levels of intuition were associated with higher levels of seniority. Based on these findings of the previous research, the following hypotheses are developed in order to test RQ 1,
i.e. are there individual differences in the use of intuitive (experiential) and analytical (rational) thinking styles amongst members of police organisations.

\( H_4 \) There is no gender difference in terms of intuitive (experiential) thinking style

\( H_5 \) Intuition is positively related to job level

\( H_6 \) Intuition is positively related to experience

\( H_7 \) Police officers are more intuitive than police staff

The sub-group comparisons are based on a three-factor model (i.e. RE, RA, and E). Table 6.6 shows the inter-correlations (police staff above diagonal and police officers below diagonal), reliabilities (Cronbach’s alpha for sample in bold along diagonal), means (and SDs), and sub-group comparisons by occupational group and gender.

For police staff the correlations between experientiality and rationality (ability and engagement) were non-significant \((.10 \leq r \leq .11)\), whilst for the police officers the correlations were statistically significant \((p < .01)\) but small \((.16 \leq r \leq .19)\) further confirming the independence of intuition and analysis (see \( H_1 \) above).

The Cronbach’s alpha reliabilities for the scales are reported in Table 6.6: \( \alpha = .75 \) for rational engagement, \( \alpha = .80 \) for rational ability, and \( \alpha = .89 \) for experientiality, indicating that the scales had good internal reliability. Typically a scale is considered to be satisfactory if above 0.70 (Sekaran, 2003).

Tabachnick and Fidell (2007) indicate that with negative skewness there is a pileup of cases to the right and the left tail is too long, and that Kurtosis values above zero signify a distribution that is too peaked with short, thick tails. Whilst a more ‘peaky’ distribution with a slight negative skewness was noted for rationality variables, the concentration of scores appears to be relatively bell-shaped in all three distributions. It is observed from the statistical data that for all three variables the cases fall within .50 standard deviation of the mean. This suggests that the actual degree of departure from normality is marginal which indicates reasonably normal distribution of the variables.
<table>
<thead>
<tr>
<th>REI</th>
<th>Model</th>
<th>$\chi^2$</th>
<th>df</th>
<th>$X^2$/df</th>
<th>GFI</th>
<th>IFI</th>
<th>RMSEA</th>
<th>$\Delta\chi^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long-form</td>
<td>Model $L_2$, E &amp; R (2 factors)</td>
<td>1028.941</td>
<td>742</td>
<td>1.550</td>
<td>.742</td>
<td>.818</td>
<td>.059</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Model $L_{3.1}$, E, RE &amp; RA (3 factors)</td>
<td>988.196</td>
<td>659</td>
<td>1.500</td>
<td>.750</td>
<td>.836</td>
<td>.056</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Model $L_{3.2}$, EP, EN &amp; R (3 factors)</td>
<td>996.834</td>
<td>662</td>
<td>1.506</td>
<td>.749</td>
<td>.833</td>
<td>.056</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Model $L_{4.1}$, EE, EA, RE &amp; RA (4 factors)</td>
<td>973.955</td>
<td>656</td>
<td>1.485</td>
<td>.755</td>
<td>.842</td>
<td>.055</td>
<td>14.24**</td>
</tr>
<tr>
<td></td>
<td>Model $L_{4.2}$, EP, EN, RE &amp; RA (4 factors)</td>
<td>951.938</td>
<td>655</td>
<td>1.453</td>
<td>.759</td>
<td>.853</td>
<td>.053</td>
<td>44.89**</td>
</tr>
<tr>
<td>Short-form</td>
<td>Model $S_1$, E-R (1 factor)</td>
<td>108.282</td>
<td>20</td>
<td>5.414</td>
<td>.834</td>
<td>.637</td>
<td>.167</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Model $S_2$, E &amp; R (2 factors)</td>
<td>14.363</td>
<td>20</td>
<td>.718</td>
<td>.978</td>
<td>1.023</td>
<td>&lt;.001</td>
<td>-</td>
</tr>
</tbody>
</table>
Table 6.6 Means (SDs), Reliabilities (Cronbach alpha for sample in bold along diagonal), Inter-Correlations (police staff above diagonal, police officers below diagonal), and Sub-Group Comparisons by Occupational Group and Gender (*p < .10; †p < .05; **p < .01; ***p < .001; one-tailed test)

<table>
<thead>
<tr>
<th>Scale</th>
<th>Inter-correlations</th>
<th>Sample</th>
<th>Occupational Group</th>
<th>Gender</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>RE</td>
<td>RA</td>
<td>E</td>
<td>Mean (SD)</td>
</tr>
<tr>
<td>RE</td>
<td>.75</td>
<td>.60**</td>
<td>.10</td>
<td>3.82 (.50)</td>
</tr>
<tr>
<td>RA</td>
<td>.65**</td>
<td>.80</td>
<td>.11</td>
<td>3.98 (.50)</td>
</tr>
<tr>
<td>E</td>
<td>.19**</td>
<td>.16**</td>
<td>.89</td>
<td>3.68 (.48)</td>
</tr>
</tbody>
</table>
A two-way analysis of variance (occupational group x gender) revealed a small but statistically significant effect of occupational group on experientiality ($F = 16.143; p < .001$), i.e. police officers reported higher experientiality scores than did their staff colleagues, thus supporting $H_7$. Additionally, there was a marginally significant interaction ($F = 2.684; p = .102$) between occupational group and gender in their effect on experientiality (Model $R^2_{adj} = .03$), see Table 6.7. Also, in contrast with previous research there was no main effect of gender on rational ability ($F = .932; p = .335$) or experientiality ($F = .114; p = .736$) (Pacini and Epstein, 1999). This finding supports $H_4$.

Table 6.7 Summary of Two-Way ANOVA

<table>
<thead>
<tr>
<th></th>
<th>Main effects</th>
<th>Interaction</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Occupational Group</td>
<td>Gender</td>
</tr>
<tr>
<td>RE</td>
<td>.357 (.551)</td>
<td>.013 (.909)</td>
</tr>
<tr>
<td>RA</td>
<td>.757 (.385)</td>
<td>.932 (.335)</td>
</tr>
<tr>
<td>E</td>
<td>16.143 (.000)</td>
<td>.114 (.736)</td>
</tr>
</tbody>
</table>

As presented in Table 6.8, a one-way analysis of variance (ANOVA) within the police officer sub-group revealed a main effect of job level on rational ability (ranks of Chief Inspector, Superintendent and Chief Superintendent, i.e. the SMT, reported higher rational ability scores). Unlike in previous research (e.g. Allinson and Hayes, 1996), a surprising finding was that there was no effect of job level on experientiality, thus rejecting $H_5$. Within the police staff group there was a main effect of job type on rational ability and engagement (staff in intelligence roles reported higher levels of rationality than their administrative or community support colleagues). Similarly, no effect of job type on experientiality was observed.
<table>
<thead>
<tr>
<th>Sub-group</th>
<th>Level/Type</th>
<th>RE</th>
<th>RA</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Police Officer Job Level</td>
<td>Constable</td>
<td>3.79 (.50)</td>
<td>3.94 (.47)</td>
<td>3.74 (.43)</td>
</tr>
<tr>
<td></td>
<td>Sergeant</td>
<td>3.86 (.46)</td>
<td>4.09 (.44)</td>
<td>3.73 (.53)</td>
</tr>
<tr>
<td></td>
<td>Inspector</td>
<td>3.90 (.44)</td>
<td>4.04 (.53)</td>
<td>3.71 (.41)</td>
</tr>
<tr>
<td></td>
<td>SMT</td>
<td>4.00 (.42)</td>
<td>4.21 (.44)</td>
<td>3.98 (.47)</td>
</tr>
</tbody>
</table>

\[ F = 1.13; p = .337 \quad F = 2.77; p = .042 \quad F = 1.12; p = .340 \]

| Police Staff Job Type       | Administrative | 3.77 (.51) | 3.93 (.55) | 3.55 (.52) |
|                             | Intelligence   | 3.91 (.46) | 4.10 (.39) | 3.53 (.52) |
|                             | Community Support | 3.47 (.43) | 3.61 (.66) | 3.70 (.44) |

\[ F = 5.19; p = .007 \quad F = 6.09; p = .003 \quad F = .706; p = .495 \]
Finally, there were a number of statistically significant ($p < .05$) but small correlations between RE and RA and participants' levels of experience at .09 and .10 levels respectively (see Table 6.9). This is surprising given that the expertise-based view of intuition (e.g. Simon, 1987) suggests a positive relationship between intuition and experience. It is however consistent with previous empirical work which found statistically significant but low correlations between intuition (i.e. experientiality) and years of experience (Leybourne and Sadler-Smith, 2006). Moreover, the differential pattern of these associations supports the engagement/ability distinction. An anticipated relationship between experientiality and experience has not been observed, thus rejecting $H_6$.

Table 6.9 Correlations between RE, RA and E, and Experience

<table>
<thead>
<tr>
<th></th>
<th>RE</th>
<th>RA</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample</td>
<td>.09*</td>
<td>.10*</td>
<td>.07</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>-.22**</td>
<td>-.14</td>
<td>.13</td>
</tr>
<tr>
<td>Male</td>
<td>.23**</td>
<td>.18**</td>
<td>.02</td>
</tr>
<tr>
<td>Occupational Group</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Police Officer</td>
<td>.11*</td>
<td>.17**</td>
<td>-.04</td>
</tr>
<tr>
<td>Police Staff</td>
<td>.06</td>
<td>-.00</td>
<td>.09</td>
</tr>
<tr>
<td>Job Level</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constable</td>
<td>.05</td>
<td>.13</td>
<td>-.03</td>
</tr>
<tr>
<td>Sergeant</td>
<td>.20</td>
<td>.14</td>
<td>-.05</td>
</tr>
<tr>
<td>Inspector</td>
<td>.05</td>
<td>-.02</td>
<td>-.17</td>
</tr>
<tr>
<td>SMT</td>
<td>.29</td>
<td>.55</td>
<td>-.28</td>
</tr>
</tbody>
</table>

Pearson product moment; *$p < .05$; **$p < .01$

Higher levels of correlation between rational engagement and experience were observed across females and males. Additionally, the pattern of correlations for RE and RA for males and females, whilst of similar magnitude, is reversed. A negative correlation for females between level of experience and rationality (ability and engagement) indicates that as females become more experienced, their level of rationality goes down. Also supporting this finding, the positive correlation between
level of experience and experientiality suggests that as females become more experienced they become more intuitive. For males, positive high correlation between level of experience and rational engagement suggests that as they become more experienced their level of rational engagement increases. A very low correlation is noted between experience and experientiality for males.

A statistically significant but small correlation is observed between rationality and experience for police officers. Finally, contrary to previous research (Hodgkinson and Sadler-Smith, 2003a), higher correlations are noted between rationality and experience for senior officers suggesting that with more experience they become more rational/analytical (and less intuitive). However, with all of the statistically significant correlations the effect sizes are small, and hence the conclusions drawn from correlational analyses must be treated with considerable circumspection.

6.3 Discussion and Conclusion

This chapter reported the findings of the REI survey. In Section 6.2.1 the EFA revealed that, in support of Pacini and Epstein (1999), rationality and experientiality scales emerged as two separate scales. Additionally, rational engagement and ability subscales emerged as separate factors, and the findings found support for the negatively-worded and positively-worded experientiality items rather than experiential ability/engagement distinction. Therefore, in adopting Pacini and Epstein's (1999) refinement of the REI, the ability/engagement distinction may be waived for experientiality, but not for rationality.

In Section 6.2.2, using CFA five competing models of the REI factor structure have been tested and also compared to the REI's short-form (Epstein et al, 1996). The long-form REI based on three factors (i.e. experientiality, rational engagement and rational ability) offered the model and scoring method of choice for the REI based on fit indices and theory. Researchers for whom rational ability and engagement are not vital distinctions should not lose sight of the fact that the short-form REI provides a highly compact and reliable measure ideally suited to use in field settings.
Finally, in Section 6.2.3 the sub-group comparisons revealed that, in support of previous research there is no gender difference in terms of the intuitive thinking style; and as anticipated the police officers appear to be more intuitive than police staff. However, there is lack of support to confirm that intuition is positively related to job level or experience. The findings are summarised in Table 6.10.

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>$H_1$ Rationality and experientiality scales will not be related</td>
<td>✓</td>
</tr>
<tr>
<td>$H_2$ Rational engagement and rational ability subscales will emerge</td>
<td>✓</td>
</tr>
<tr>
<td>$H_3$ Negatively-worded experientiality and positively-worded experiential</td>
<td>✓</td>
</tr>
<tr>
<td>$H_4$ There is no gender difference in terms of intuitive orientation</td>
<td>✓</td>
</tr>
<tr>
<td>$H_5$ Intuition is positively related to job level</td>
<td>×</td>
</tr>
<tr>
<td>$H_6$ Intuition is positively related to experience</td>
<td>×</td>
</tr>
<tr>
<td>$H_7$ Police officers are more intuitive than police staff</td>
<td>✓</td>
</tr>
</tbody>
</table>

✓ Accepted  × Rejected

Overall, these data clearly demonstrate that there are individual differences between members of police organisations in terms of the extent to which they use intuitive and analytical processing. These data also confirm that the distinction between analysis and intuition as separate modes of information processing is a valid one and commensurate with dual-process theory.

The remainder of this thesis adopts a qualitative approach for the study of how senior police officers use intuitive judgement. As noted by many intuition researchers, there is a dearth of qualitative research in this field. Moreover, it will also be necessary to explore the feasibility of such an approach which is the focus of the next chapter.
Chapter 7  Pilot of Study 2

7.0 Introduction

This chapter presents the pilot study which explores senior managers’ experiences of intuition from an individual perspective. The main objective was to employ CIT in order to test its usability in Study 2 to investigate intuitive decision making processes in senior management teams. The pilot study also provided insights into the properties senior managers ascribe to intuition and the factors which influence its use in decision making.

The chapter is organised in four sections. The first section relates to the participants’ use of intuition in managerial contexts and reports the data in direct quotations gathered from individual interviews. The second section documents a selection of these managers’ retrospective accounts of critical incidents, and a typology of intuition-decision outcome (i.e. ‘intuitive hits’ and ‘intuitive misses’) is developed in light of the findings. Section three summarises the findings, and section four concludes the chapter. A list of participants and their positions within their respective organisations is provided in Table 7.1. For confidentiality, the names of the participants and their organisations remain anonymous.

7.1 Use of Intuition in Decision Making

The findings from the interviews indicate that the majority of managers (12 out of 13 participants) said that they use intuition in making strategic decisions. While some of them use intuition nonconsciously, others are more consciously aware of their use of intuition.

“I certainly use intuitive judgement. I think sometimes it’s quite difficult to be entirely conscious of the way you make decisions. Perhaps I use intuition even more than I consciously think I do. Very often I get very quickly a sort of gut feel, a sense of where I want to go. I look at the facts and the rationalisation of that. But because I
have a sense of where I want to go, it’s like I see what should happen next and it always seems incredibly clear to me.” [Participant A]

“I make a conscious effort to use my intuition more. Because my education was as an engineer so I basically have all the intuition beaten out of me. For so many years, my natural decision making process tended to be very rational, logical and I probably did use intuitive judgement but I wasn’t very aware of it. Whereas now, I actually consciously ask myself what my gut, my stomach is telling me.” [Participant B]

Table 7.1 List of Participants in Pilot Study

<table>
<thead>
<tr>
<th>Code</th>
<th>Position</th>
<th>Industry</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Executive Coach</td>
<td>Management consultancy</td>
</tr>
<tr>
<td>B</td>
<td>Chairman</td>
<td>Management consultancy</td>
</tr>
<tr>
<td>C</td>
<td>Managing Director</td>
<td>Manufacturing</td>
</tr>
<tr>
<td>D</td>
<td>Managing Director</td>
<td>Management consultancy</td>
</tr>
<tr>
<td>E</td>
<td>Director</td>
<td>Management consultancy</td>
</tr>
<tr>
<td>F</td>
<td>Managing Director</td>
<td>Manufacturing</td>
</tr>
<tr>
<td>G</td>
<td>Managing Director</td>
<td>Financial services</td>
</tr>
<tr>
<td>H</td>
<td>Board Director</td>
<td>Management consultancy</td>
</tr>
<tr>
<td>I</td>
<td>Managing Director</td>
<td>Systems integration</td>
</tr>
<tr>
<td>J</td>
<td>Managing Director/Owner</td>
<td>Publishing</td>
</tr>
<tr>
<td>K</td>
<td>Director/Owner</td>
<td>Management consultancy</td>
</tr>
<tr>
<td>L</td>
<td>Managing Director/Owner</td>
<td>Manufacturing</td>
</tr>
<tr>
<td>M</td>
<td>Executive Coach</td>
<td>Management consultancy</td>
</tr>
</tbody>
</table>

On the other hand, one of the participants said, being technically biased in his work, he does not rely on intuition in making strategic decisions, however more so when he is trying to solve a problem.

"Whether you call it intuition or experience, I feel that often given 20 avenues of investigation to solve a problem, I may hit the correct avenue on first or second go. That’s probably where I would call it intuition. Intuition, when applied in this way, is actually application of experience without going through a different level of understanding. You are using analytical processes and you’re not aware but you are actually using information that you’ve gathered over years.” [Participant C]
Although the significance of intuitive judgement is recognised in managerial decision making by the participants, one problematic aspect of it for them is that it is not backed up by ‘hard’ evidence; therefore it is difficult for them as decision makers to ‘prove’ whether their intuition is right or wrong.

“"When faced with a situation where your intuition is telling you to make a certain decision but one cannot back that up with anything much more than a statement that says ‘it feels the right thing to do’ then you are very exposed and isolated.” [Participant D]

“You have hunches about something which could work, but which is not necessarily provable. An awful lot of good ideas, I suspect, would have been lost if someone said ‘prove to me this is going to work first’.” [Participant E]

“I see that intuition also comes into effect when I look at management accounts and whole set of figures. I would say there is something wrong. I don’t know what’s wrong but there is something wrong and I can’t say where it came from. Normally when that happens there is something wrong. That’s in fact an intuition and then it leads on to some change.” [Participant F]

Sadler-Smith and Shefy (2004) suggested that in decision making, intuition is as important as rational analysis, and executives might achieve a more balanced perspective by considering both rationality and intuition as complementary and mutually reinforcing components of a decision making approach.

“I think I come to rely on intuition quite heavily, because I believe that it plays an important part. But I don’t solely rely on it. I am also quite analytical. When I have sufficient time and where it’s economic to do so, I will research all of the options very carefully. Then I will make any decision based on my analysis of that research, but that decision will be influenced by intuition. Sometimes you find there isn’t sufficient time to carry out the level of research that you would wish then you rely most exclusively on intuition.” [Participant G]

“Obviously a lot of decisions are based on facts but in terms of exactly where the final direction of a decision really relies on is intuition. I would say probably 50-60 percent of the time the final decision is through intuition.” [Participant F]

In relation to the importance of balancing intuition with rational analysis, Participant E added the following comments:
“Certainly in a business scenario it’s actually very useful to have people who are on both sides of the fence. If you have a group of people who are highly intuitive, the likelihood is that there will be nothing but thinking of new ideas. They’ll never get around doing anything about them.” [Participant E]

According to the participants, there are a few factors that influence the use of intuition in decision-making. For example, Participant B would employ intuitive judgement in his decisions depending on the availability of facts and data. If there is not enough time to find out the information required to go through an analytical process, he would rely more on intuition. Additionally, other participants added that their use of intuition depends on how quick the decision needs to be made.

“I think speed, where you need to make a decision quickly and you perhaps have not got the time to do research.” [Participant H]

“When you need to make a quick decision, that could be based on past experiences, or that could be based on just what you feel at that time.” [Participant I]

For most of the participants the effective use of intuitive judgement is down to experience.

“I think experience, definitely previous experience, background, knowledge, and information.” [Participant D]

“I think it’s down to experience. Experience gives you a better idea about how to use your gut feel, intuition to make the right choices.” [Participant I]

“I think it’s mainly experience. I think that over time you learn from your mistakes. Also, when you made decisions in the past that happened to be the right ones that can programme the way in which you respond in the future to similar circumstances. When I’m faced with a decision now, what I do partly subconsciously is to refer back to some of the decisions that I’ve made before and the circumstances that they are related to. Essentially I use the experience of the result of those decisions to inform the decisions that I’m currently required to make.” [Participant G]

From the participants’ point of view, intuition is effective when related to ‘people’ type of decisions, such as: whether they feel they can trust certain people, whether they want to do business with them, or whether they can establish a ‘pull’ with them.
It is also most obvious in recruitment decisions, for example, do they want to employ somebody; do they want to work with somebody; do they want somebody as a client? These kinds of decisions, from the perspective of the interviewees, tend to be more intuitive and based on intuition rather than going through an analytical process.

Participants expressed their views on when intuition is most effective:

"When the decision needs to be made in hurry and there is a lack of other information it’s the most effective thing that you have. It might be ineffective, but it is the most effective thing that you have.” [Participant D]

"I think it can be most effective when faced with a need to make a very quick decision. Certainly I’ve noticed that as I’ve become more experienced my intuition has become more effective in that I’m able instinctively to make a decision that proves to be correct based on my past experience.” [Participant G]

"I suppose the more complex the situation the more important it is to call on intuition. Because we work on such intricate projects sometimes that you almost have to go with the information and beyond information too. It’s like the expression 'taking the helicopter view’ you almost have to put everything under the table and let go, elevate yourself, look at it and you have intuitive element which is helping you decide what to do.” [Participant J]

7.2 Critical Incidents

In the interview protocol, participants were only asked to provide examples of effective and ineffective intuitive decisions they made, however other examples also emerged from the interviews whereby the participants did not follow their intuitions. One of the hallmarks of CIT is its use in the formation of categories as a result of analysing the data (Flanagan, 1954). On the basis of the analysis of the data, there are four emerging categories from this part of the interviews: (1) intuitive hits (intuition heeded – positive outcome); (2) intuitive misses (intuition heeded – negative outcome); (3) intuition irrelevent? (intuition not heeded – positive outcome); and (4) what if? (intuition not heeded – negative outcome). These are summarised below with relevant examples. From the analysis of the critical incidents an intuition-decision outcome typology can be drawn as follows.
The above typology is founded on two principal factors: first is the decision whether to heed an intuition or not; and the second is the outcome of the event. In this respect, an intuition — whether heeded or not — consequentially leads to a positive or a negative outcome. As shown on the left hand side of the typology, if a heeded intuition leads to a positive outcome, it can be said that it was a good decision to follow the intuition and this immediately promotes a sense of “my gut feel was right”. On the other hand, if a heeded intuition leads to a negative outcome, it is judged that the intuition was wrong and following the intuition was a bad decision. This will prop up the sense of “I should not have listened to my gut feel”. Boxes 1 and 2 therefore represent ‘intuitive hits’ and ‘intuitive misses’ respectively.

The situation in which intuition is not heeded is somewhat more problematic to conceptualise. The right hand side of the typology shows the possible outcomes if an intuition is not heeded. It should be noted here that on this side of the typology the status of the intuition (i.e. right or wrong) is ‘indeterminate’ simply because the intuition was not heeded. The outcome has been reached regardless of what direction
the intuition pointed. Therefore, the intuition cannot be judged to be right or wrong per se, as we cannot be sure whether the same (or the opposite) outcome would have been attained if we did follow our intuition. Furthermore, it is the outcome of the situation that matters (i.e. positive or negative), and it is the outcome of the situation by which we judge the decision of following the intuition to be a good or bad action, as well as the intuition to be right or wrong (if the intuition is heeded). Box 3 represents the situation of intuition as ‘irrelevant?’ since a positive outcome was experienced anyway. Box 4 represents ‘what if?’ (intuition had been followed).

Accordingly, if an unheeded intuition leads to a positive outcome, not listening to the intuition can be said to be part of a process that ultimately led to a good decision. Although, given the explanation above, the status of the intuition is indeterminate, it is perhaps understandable for decision makers in such circumstances to think that “probably my gut feel was wrong” since not heeding my intuition led to a positive outcome. Finally, if an unheeded intuition leads to a negative outcome, it can be said that not heeding the intuition was part of a process that ultimately led to a bad decision and perhaps prompts the view that “probably I should have listened to my gut feel”. But again the intuition is indeterminate as we are not sure what the outcome would have been if we did follow our intuition.

Summaries of relevant examples from each category are provided in the remainder of this section.

**Intuitive Hits (Intuition Heeded - Positive Outcome)**

Examples that fall under this category are those where a heeded intuition led to a positive outcome:

* Around 1990 Participant C was faced with a decision to manufacture a new type of machine his company has never made before. He recalls that at the time he was pressured for time to come to a decision and he did not have enough facts to make a reasoned decision. Therefore, he followed his intuition to go ahead with this project as he felt it would be successful and have positive outcomes for the
company. In the beginning it was a struggle but it did turn into a success and it marked the start of a new product line which has been very successful for the company.

- In 1975 Participant E was offered to become the sole UK distributor for a brand new range of designer sunglasses. Although at the time he knew very little about sunglasses and fashion accessories, he felt that there was an opportunity there and that it could work. Everybody else told him that he was over-committing and that the product was too expensive. But it sold well. 12 years later Participant E had a £5 million business which he sold to a public company. Following his intuition in this case resulted in being very profitable for him.

- Following the events of 9/11 the stock market started to fall dramatically. Participant G felt that this fall would not be recovered quickly. Whilst he could not be sure that he was right, he followed his intuition and made some strategic changes in the company which included downsizing the staff numbers. In order to make it easier, or more likely that they survived the downturn in the economy, Participant G had to make 15 people redundant. This decision helped them survive a period of two years when business revenue was much lower than it was previously budgeted. He believes that if he had not taken that decision back then, they could have ended up making 25 people redundant later on. Therefore, acting quickly on his intuition saved the company in difficult times as well as the jobs of 10 people.

Intuitive Misses (Intuition Heeded — Negative Outcome)

Examples of situations where intuition was heeded but it led to a negative outcome:

- A few years ago Participant B intuitively felt it was a good opportunity to get together with four other colleagues doing the same kind of job to establish their own company. He felt that he and his colleagues all had the same attitude and approach, and wanted to do the same kind of things. He recalls that he did not really do any rational logical analysis of the whole thing. After working together
with this team for about 6 months he realised that they all had different motivations and interests, and there was a complete misunderstanding of expectations. Two years later, he came to the conclusion that it just was not going to work and they closed down the business. Reflecting back, Participant B explicated that he should have put a lot more effort in rational logical side about the strategy, objectives and expectations instead of simply following his intuition.

About four years ago, Participant F decided to set up business operations in China as they believed that there would be a big market for selling their software. Since they needed to make the decision quickly at the time, they did not do a thorough research and they did not base their decision on facts. They believed that Beijing was the right place to set up. Consequently the business failed as it turned out that Beijing was totally the wrong place. Shanghai would have been a much better place for the operations, and they should have planned it better to have the right people with industry knowledge for the operations to survive.

Participant K introduced someone into the company whom he has known for some time but never really worked with. He seemed to be a good guy with lots of knowledge and know-how. Participant K did not interview him the way they would normally do, he just came along to meetings and joined the company. As it turned out he was too much of a ‘thinker’ but not someone to go and get business. Reflecting back, Participant K defined it as a poor judgement on his part. Perhaps more structured analysis would have helped him to decide whether he was the right person for the company or not.

**Intuition Irrelevant? (Intuition Not Heeded – Positive Outcome)**

Examples for this category would include situations where intuition was not heeded but still a positive outcome was experienced. However, no examples were generated from the interview data that would fit in this category. The reason for this is that in the interview schedule the participants were only asked to report critical incidents where they did follow their intuition to make a decision. They were not prompted to report situations where not heeding their intuition led to a positive outcome.
Nevertheless this category emerged as one of the four possible outcomes from the conceptual framework created around the interview data and it provides a direction for further exploration of this kind of situations.

The examples below that relate to situations where not heeding an intuition led to a negative outcome were volunteered by the participants themselves without being asked as part of the interview schedule.

**What If? (Intuition Not Heeded – Negative Outcome)**

The following examples include situations where intuition was not heeded and it led to a negative outcome:

- A client company was having certain issues with an individual employee and they sought advice from Participant D. Listening to the profile of the individual and the characteristics of what was happening, the situation looked similar to a previous one that Participant D has come across before. Therefore, he advised the client to get rid of that individual as soon as possible as he intuitively felt that this individual could potentially put the company in jeopardy. In due course, his advice was not taken and some rationality was put into the decision with the hope to modify the employee’s behaviour. About eight months after the initial conversation with this client, it turned out that the employee continued with the same behaviour and was not being open and honest which actually put the company in jeopardy. At that point, the client decided to fire the employee. Participant D concluded that if his intuition was followed in the first place, it probably would have saved a lot of time and money.

- Participant C recalls recruiting two people although he did not have good feelings about them. However, he did not follow his intuition and recruited them as there was not a lot of choice at the time, and he needed somebody for the job. In both cases, with the passage of time it became apparent that the people he recruited were not right for the company.
7.3 Summary of Findings

This pilot study has presented the research findings that emerged from the investigation of the use of intuitive judgement in decision making. One of the important conclusions derived from the literature is that many managers use intuitive judgement to assist their problem solving and decision making, especially under complex or uncertain conditions (Burke and Miller, 1999; Hayashi, 2001; Isenberg, 1984; Parikh et al, 1994). The data from the interviews revealed similar findings which are summarised in the following sixteen key points.

The following factors influence the use of intuition in decision making:
- speed to make the decision
- when the decision is related to people issues (e.g. recruitment)
- when there are many decisions to be made
- pattern recognition (i.e. does the variety of events represent a pattern that is similar to the ones I have dealt with before?)

The findings from the analysis of the interviews suggested that participants use intuition in making strategic decisions in the following circumstances:
- when there is a lack of data (i.e. the facts are not available)
- when in hurry to make a quick decision
- when there is lack of time and resources to be devoted for research
- when the situation is complicated
- in uncertainty and when there is a lot of unknowns
- in crises and when there is not a lot of time to reflect
- when there needs to be made a judgement rather than an analysis

The participants indicated that the effective use of intuitive judgement in decision making depends on:
- experience, background, and knowledge of the decision maker
Additional themes that emerged from the interviews included:

- in business it is useful to have both types of people – intuitive and analytical – as they create a good balance
- intuition cannot be proven, thus ideas and opportunities may get ‘lost’ or remain indeterminate (see Figure 7.1)
- intuition is referred to by managers as a ‘feeling’ thus confirming the somatic aspect of intuition
- intuition is perceived to become more effective as the decision maker gains experience.

7.4 Conclusion

On the basis of this pilot study several points and emerging themes have been identified which confirm and extend previous research. The findings provided evidence that intuition is used in complex and uncertain environments, to make fast decisions, and it can lead to improved managerial decision making through development of experience. These findings open up further questions and therefore require further investigation of the use of intuitive judgement in strategic decision making. It should be noted that an important limitation to this study was the selection of the sample group. Large proportion of the participants was already informed about intuition, thus they were not naïve decision makers. Therefore, it raises the question on the extent to which they were able to comment objectively on the use of intuition. In future research it would be beneficial to work with a sample of managers who were less informed but have a greater wealth of strategic and operational decision making experience upon which to draw.

To conclude, the application of the CIT provided a useful tool for the thorough exploration of senior executives’ accounts of intuitive decision making. In this respect, the pilot study has been instrumental in the development of the intuition-decision outcome typology as a unique analytical tool. The focus of Study 2 is the decisions whereby the decision makers heeded their intuitions. Therefore, Study 2 will employ the concepts of ‘intuitive hits’ and ‘intuitive misses’ from this typology.
Chapter 8  Study 2a: Intuitive Hits

8.0 Introduction

This chapter presents the first part of Study 2 of the research. There are three case studies of decision making processes that took place at three police organisations (POA, POB and POC). These cases are referred to as ‘intuitive hits’ as these decisions were described by the participants to have involved ‘intuitions’ as a response to a critical incident and were judged to have had effective outcomes.

The three decision making processes presented in this chapter were based on Crossan et al’s (1999) 4I framework specifically identifying the feed forward learning processes: the intuiting (I₁), interpreting (I₂), integrating (I₃) and institutionalising (I₄) processes, linking the individual, group and organisation levels. Essentially the cases described and analysed here focus on what happens during the above processes, such as: how intuitions arise during the intuiting process and on what basis; how the participants make sense of their intuitive judgements and explain them to others in the interpreting process; what interactions occur within the management teams during the integrating process; and how these teams embed their intuitions in the organisation through the institutionalising process. The figures at the end of each case illustrate the decision making process in respect to the 4I framework. Each level of process is marked throughout the case as well as on the figures (e.g. by the lower case letters (a), (b), (c) etc.) and can be read in conjunction with these.

The data presented here includes direct quotations gathered from the focus group interviews with the participants. The complete list of the categorisation of the thought units from the interviews relating to ‘intuitive hits’ are provided in Appendix 6. Only a small selection of quotes were included in this chapter; the choice of quotes is based on the researcher’s subjective judgement of being the most illustrative examples to complement the ‘stories’ presented here. All names of participants and organisations have been changed to protect the anonymity and confidentiality of the...
individuals and their respective organisations. Table 8.1 shows the list of participants and their positions within their respective organisations.

Table 8.1 List of Participants in Study 2

<table>
<thead>
<tr>
<th>Participant</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Organisation: POA</strong></td>
<td></td>
</tr>
<tr>
<td>Participant A</td>
<td>Chief Superintendent</td>
</tr>
<tr>
<td>Participant B</td>
<td>Superintendent Partnerships</td>
</tr>
<tr>
<td>Participant C</td>
<td>Superintendent Operations</td>
</tr>
<tr>
<td>Participant D</td>
<td>Detective Chief Inspector Crime Operations</td>
</tr>
<tr>
<td>Participant E</td>
<td>Detective Chief Inspector Crime Management</td>
</tr>
<tr>
<td>Participant F</td>
<td>Chief Inspector Ops &amp; Neighbourhood Policing</td>
</tr>
<tr>
<td>Participant G</td>
<td>Special Constable</td>
</tr>
<tr>
<td>Participant H</td>
<td>Business Manager</td>
</tr>
<tr>
<td>Participant I</td>
<td>Director of HR</td>
</tr>
<tr>
<td>Participant J</td>
<td>Police Sergeant</td>
</tr>
<tr>
<td>Participant K</td>
<td>Police Constable</td>
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<tr>
<td><strong>Organisation: POB</strong></td>
<td></td>
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<tr>
<td>Participant L</td>
<td>Chief Constable</td>
</tr>
<tr>
<td>Participant M</td>
<td>Deputy Chief Constable</td>
</tr>
<tr>
<td>Participant N</td>
<td>Assistant Chief Constable</td>
</tr>
<tr>
<td>Participant O</td>
<td>Assistant Chief Constable</td>
</tr>
<tr>
<td>Participant P</td>
<td>Director of HR</td>
</tr>
<tr>
<td>Participant Q</td>
<td>Director of Finance</td>
</tr>
<tr>
<td><strong>Organisation: POC</strong></td>
<td></td>
</tr>
<tr>
<td>Participant R</td>
<td>Chief Superintendent</td>
</tr>
<tr>
<td>Participant S</td>
<td>Superintendent Operations</td>
</tr>
<tr>
<td>Participant T</td>
<td>Superintendent</td>
</tr>
<tr>
<td>Participant U</td>
<td>Detective Superintendent</td>
</tr>
<tr>
<td>Participant V</td>
<td>Chief Inspector</td>
</tr>
<tr>
<td>Participant W</td>
<td>Chief Inspector</td>
</tr>
</tbody>
</table>

8.1 Case 1: Organisational Restructure at POA

At the end of 2007, the POA was under considerable pressure both externally and internally to restructure the organisation in order to ‘re-engineer’ the way they did business. In the initiating process, externally, there was a drive from the government to deliver an ‘effective and efficient’ police service, and the changes occurring within
the local Council meant that POA needed to structure its business in line with their local partners in order to work with them collaboratively.

“What we saw was a change, a change in demand both internally and externally in the case that we needed to reengineer the way that we did business. We didn’t wake up one morning and say we’re going to do this. What we saw was the external influences that were impacting upon us.” [Participant B]

“Externally there is a drive from the government to deliver an effective and an efficient police service. There are a number of papers and government policies, there is a reducing bureaucracy paper... a national green paper that talks about delivering core standards to the policing, so a Policing Pledge and again this is about structuring our services, so that we can deliver pure customer service, according to that Policing Pledge.” [Participant C]

On the other hand, internally, staff workloads were extremely high mainly due to unclear lines of accountability, which led to high anxiety and sickness levels within the organisation. This in turn resulted in poor performance around detection and reduction of crime, thus causing poor satisfaction and confidence within the local community. The crime performance figures were ‘in the red’ and the senior officers were under scrutiny from the chief officers group.

“A year ago a response officer would have turned up to go to work, and there wouldn’t have been enough people in my world, so they would have ended up with the prisoners themselves, and somebody from a neighbouring policing side would have moved across to the response team, and there was this merry-go-round, where everybody was doing somebody else’s instead of what they were trained in.” [Participant E]

“I think certainly there were meetings with the wider management team and there was an event where they were asked to review for example are our existing structures fit for purpose and some of those questions that drew the answers out led again to us knowing that we couldn’t just sit where we were with the status quo, there needed to be a change.” [Participant C]

Around the same time, the County Basic Command Unit (BCU) had changed to a certain structure and this also initiated a motivation amongst the senior officers of POA to emulate that structure. They recognised the inefficiencies in how they were operating. Collectively they had the vision of what they needed to do in order to
achieve improved performance efficiency and provide the highest quality service to the public.

"It might have started as a bit of a stalking horse but eventually it became a no brainer in the sense we couldn’t carry on the way we did. We weren’t managing the demand effectively as we ought to have been." [Participant A]

"I think we knew we had to move towards the structure of the County BCU." [Participant A]

However, the senior officers were not able to progress these changes as quickly as they would have liked. Due to the strict hierarchical structure of the organisation, at the time all decisions were being made by the Headquarters. For any kind of change within the organisation there needed to be an authority and ‘go ahead’ from the chief officers, who at the time were reluctant to allow anything as radical as changing the BCU structure as it had been tried before unsuccessfully.

"The timeline sort of stopped, whilst we were going through the scoping bit, we weren’t able to progress it quite as quickly as we would have liked, because there were barriers that had been put up at the chief officer level." [Participant C]

By the time of David’s arrival, as the new BCU Commander (and the Chief Superintendent) in early 2008, there was a growing frustration within the senior management team over the performance deficiencies as they were not able to manage the demand effectively. It was summer 2008 when the Deputy Chief Constable finally said “go for it”. Eventually the flood gates were opened and providing that they stayed within the budget of £20 million the POA’s senior officers were given the authority to start the change process. The senior officers emphasised that this was a time pressured process as they were given only a short time frame to make the change happen.

"Then when the green light came on the sort of pace of change picked up and we were told, ‘yeah, you can crack on with it now’, and actually we needed to deliver it by X, so there was a very, very short timeframe." [Participant C]
As the next step, the senior officers started looking at some of the best practice in other parts of the country by visiting various BCUUs similarly positioned to POA, to see what models they had, and how they have structured and operated.

"Inevitably there was going to be the point where we actually start looking what other Forces do around their neighbourhood policing teams, and realising that what we're trying to achieve, no-one else was trying to achieve, well very few other Forces were trying to achieve, and what we should be trying to achieve is actually a lower level of staffing in the neighbourhood policing teams." [Participant F]

It became apparent that they needed to reduce the number of the neighbourhood policing team and divide the resources between the three major divisions of policing within the organisation: the neighbourhood policing team including response functions; the investigation of serious and organised crime; and the crime management and custody. However, this presented uncertainty and complexity since there was no straightforward formula which they could apply to the allocation of resources. Furthermore, at the time the Government changed their view on how the police would be assessed, and the single top-down indicator was going to be based on public confidence. The senior officers had to find the right balance of resources between the three areas in order to deliver what the Government was demanding from them.

"I think it's fair to say there is no magic formula in this. There is no logarithm you can apply to policing that says this, [POA], you need to put X percent into uniform policing, X percent into neighbourhood policing, X percent into CID, X percent into back office support and through applying that distribution of resources success is guaranteed. That formula does not exist. So you then really do have to rely upon intuition and professional judgement." [Participant A]

"There was a lot of business processes, it wasn't just a simple question of just saying 20 there, 60 there, 50 there, it's all fixed. It was actually reengineering the machine." [Participant D]

"If we put too many resources into the serious crime well the other stuff goes without, but if you don't put enough and the serious offenders get away, and although there's less offences there's more of a high-profile impact. So three very different competing areas where we have to get the balance right." [Participant E]
Additionally, there was ambiguity regarding the number of staff in the organisation as no one seemed to know the exact number of employees. Therefore, they needed to make sure that the staff numbers were accurate before starting the resource allocation process.

"So at the very beginning there were posts all over the place, and each of the Chief Inspectors thought they had a number of people under them, but they were double counting, so we needed to make sure that actually they had the right number to start with."
[Participant H]

In the beginning of the change process, an external consulting firm was brought in who were tasked first to validate the number of staff in the organisation, and then to analyse the demand of policing across the organisation and to provide a ‘formula’ based on that demand (which would be called ‘the demand profile’) establishing how many people are needed in each division which could then be applied to the business in terms of redistribution of the resources. Following a few months’ work, the consultants were not able to deliver a ‘resourcing formula’ and they have not managed to take the process forward.

"We had an outside firm come in and say, okay, we're being tasked to look at the Force, and find the resource formula, and find the magic button that's going to tell everybody how the whole Force should look, and that just collapsed and faded."
[Participant D]

In the discussions with the consultants, the senior officers were asked: "So what are your business rules in terms of how you redistribute staff, and what is your rationale in terms of deploying X and Y, and how have you decided that you can take from there and add to here for instance?". Through these discussions, it became obvious that there was no 'magic formula' to apply to the redistribution of resources, and hence the external consultants, who had no personal experience of policing at POA, have not been successful in delivering one. The big realisation for the senior officers was that it was not only the analysis of demand and supply of policing that was needed to take into account in making the resourcing decisions, but also there was something about ‘knowing’ the business. These senior officers had many years of policing experience, therefore they were best placed to make the resourcing decisions
themselves. What they had to do was to rely on their 'professional judgement'. Indeed, the senior officers were referring to their intuitive judgement:

"Well how do you do that, well we've been doing the job, you know, that's how many people you need for that, and all the science in the world, it actually wouldn't put us far off." [Participant D]

"I think it is intuitive, but there's a lot about knowing your business."
[Participant E]

"I think a lot of it was down to that, to the gut feeling at the end of the day, and then I'd say professional judgement through one base or another, but it was also backed up in terms of professional judgement around supply and demand, etcetera, levels of staff and other things, so those things I suppose are, when you put them all together, there's not a magic formula, it is about knowing that's what I think, a lot of it was about that." [Participant D]

"There is no magic equation, there is no magic formula and it's relying upon experience and the understanding, finger in the air, but perhaps more professional judgement of what's needed to deliver policing in [POA]." [Participant C]

This realisation marked the beginning of the intuiting (a) (see figure 8.1) process which started with the three Chief Inspectors who were going to model the restructure in POA. They were aware of the needs in various areas and also they knew the individuals in their teams, their strengths and weaknesses, hence they were best placed to make a professional judgement on how to spread that expertise across the three divisions.

"They did it all on their own experiences, because they knew their teams, so they would know which personality or which person would have the right skills per any particular role." [Participant H]

The Chief Inspectors explained that their intuitive judgements were influenced by the accumulation of their learning and experiences through the years in the police service suggesting that their past experience was the underlying foundation of their intuitions.

"I think there was intuition for the whole, it comes from something in the back of your mind, your experiences, and we've all got a certain amount of experience to stand up here." [Participant E]
“Inevitably we are a product of our learning and our experiences through the police service, the routes we have taken to the position we’re in now, and the positions, the other various roles we’ve had will affect those opinions and things.” [Participant F]

The Detective Chief Inspector for crime management attempted to explain his personal experience of intuiting which he described as having a ‘gut feeling’. He stated that all the information gets processed in his mind nonconsciously and the solution appears suddenly as a feeling, the basis of which is based in his knowledge and experience of the business.

“I tend to go on gut feelings quite a lot, but the thing is that, really gut feeling, there’s a lot of numbers and stuff going through my head, it’s like you can’t work it all out, and you wake up in the middle of the night, and there it is, because your brain’s processed it all. So yeah, there is a lot of gut feeling, but a lot of that from previous experiences, and it’s like I say, knowing the business really, for where we’ve got to in the other little bits.” [Participant E]

The Chief Inspector for operations and neighbourhood policing stated that their intuitive judgements around the distribution of resources were based on what each of them felt was the right balance to have in their respective divisions; again emphasising the fact that the model they have come up with was not an outcome of analysis of hard data, but of their judgement and gut feeling of what was needed at POA to operate effectively.

“The decisions we were making I think was an awful lot based on our intuition of what we feel is the right thing to do.” [Participant F]

“The division up of where those officers went was based around I think, the needs in various areas, and I think that probably, where there was an awful lot of intuition rather than hard fact as to where these individuals should go.” [Participant F]

“When you come down to basically what percentage of staff should be in what area of business, bearing in mind that the area of businesses all work together, and/or conflict each other in that sort of beautiful way, then inevitably it’s going to have to come down to that person feels they need X, that person needs Y, that person feels they need Z, that means he get X-2, he gets Y-2 whatever it is, however it works, and that’s always got to happen.” [Participant F]
The interpreting (b) process followed with the start of conversations between the senior officers of POA where various discussions took place. The main issue was that reducing the size of the neighbourhood policing team was going to create a pool of officers who would then be redistributed to other divisions. The discussions revolved around where they felt these officers should go, and effectively what the restructure would look like. This is where the senior officers were trying to articulate what was in fact a gut feeling, thus developing dialogue amongst themselves. Their understanding of what should be done developed the more they talked about it.

"So there’s all this debate that was going on about what should happen and what other shifts and what other departments we felt should be doing." [Participant D]

"And I think that that perception was bourn out the longer I stayed and the more we spoke, which is why to some degree, to a large degree, we said we’d deal with the way the Chief Inspector neighbourhood policing and the Chief Inspector uniform operations would come under one role to provide them with the same line management so – perception, intuition call it what you will – it’s certainly where I was." [Participant A]

"So you have all these collective discussions and then ultimately it came down in terms of what’s right for the BCU in the whole, and we had to make something fit to be direct." [Participant D]

At this stage through conversations, the senior officers were becoming clearer on their own intuitive judgements. In interpreting his intuitive judgement to his colleagues, Robert, the Chief Inspector responsible for operations and neighbourhood policing, tried justifying his judgement by putting forward his argument against the reduction of the neighbourhood policing team.

"Now the easiest way logically to get confidence is to put uniforms on the street, I argue. The other side of the argument, which I’m sure Andrew and some ways Peter would have is, if we had the information that every single crime that was reported to us there was a detective who caught every baddie and brought to justice, that would give confidence. Unfortunately a lot of the detective end of the business isn’t necessarily as visible as the uniform end is, so there’s that, and what will always be slightly conflicting, my view is put uniforms out on the street and you should reduce the crime. That means you have less to detect." [Participant F]
An Inspector and a Sergeant who were experienced in project management were given the concept and were asked to develop different options in terms of what the numbers looked like (i.e. how many people go into different parts of the business) providing reasons for or against each option. In the integrating (e) process, those options were presented to the Chief Inspectors who started negotiating, focusing on details such as the number of staff required in each team to cover certain shifts, and particular individuals with relevant skills and training suitable for specific roles.

“We did a lot of horse-trading as it were between each other, I'll have so-and-so, and need somebody with this skill set, where can I get them? Your skills, how good an investigator are you? Do you want to go and be a detective, are you going to make it realistically, no you're not, well...”  [Participant E]

“Because each of us had different demands, and it was just trying to reconcile those different demands, not just based on say numbers and input in terms of demand, and then 'okay, so that means you need that amount of people, because we're going to cover this many shifts, and this many hours'. ” [Participant D]

There were certain parameters imposed by the organisation’s Headquarters, such as dividing the policing area into four main sections. Although the senior officers did not agree with these parameters they weren’t given the authority to apply what they wanted, they had to comply with the chief officers’ demands. The Superintendent commented, “so our gut feeling wasn’t taken care of there, we had to go with the map as it was drawn”.

“We have to work within parameters, and none of us wanted those parameters, we didn’t agree with it, none of us.” [Participant E]

“It was just, and it’s we had to, we don’t like that structure, we don’t want to go with it, we want to go with this, and got so far down the line it was ‘no you’re not quite autocratic, we want four, and that’s what you’re doing’.” [Participant E]

The Chief Inspectors came up with an initial model of restructure quite early on, however the fine details were difficult to resolve. In these meetings tensions were arising from time to time as the Chief Inspectors were overly protective of their own areas and did not want to lose their teams. As it became apparent in the previous discussions, especially Robert did not agree with the principle that the number of his
neighbourhood policing team should reduce. Because of the prolonged negotiating process over a five-month period, information was getting out into the division causing rumour and speculation, as a result new ideas were coming in which altered the initial decisions, putting them back to the starting point.

"I think it was an incredibly destructive process for us to go through, in the way that we went through it, because we had some very long meetings, which were confrontational meetings between the three of us, and led to, inevitably, well saying 'okay, one's got the bare minimum, right, you've got to lose more', and so inevitably that will push people into their position of 'okay, well I'm not my bare minimum, I'm not giving up anyone'." [Participant F]

After long-lasting and tense discussions, eventually the Chief Inspectors arrived to a place where they could all agree on the level of staff that was required in different divisions to operate effectively. From the perspective of the participants, the whole process in effect brought these senior officers together and made them stronger as a management team.

"From the rest of SMT, it's built us as a stronger team because we have worked through a real challenge together." [Participant H]

"I guess apart from making a business decision, I think we grew as a team as well, as part of that journey." [Participant A]

In order to introduce what the new structure would look like, the senior officers held a variety of staff briefings, road shows and meetings. However, their efforts to communicate the new model did not seem to be received well by the organisation's staff who did not engage in this process. Although the senior management's aim was to take the staff with them along the process of change, it appeared that the consultation did not necessarily happen in the way that the staff were expecting.

"I would accept that the consultation process was not as fulsome as it might have been, there are weaknesses in that, actually there are some strengths in that as well, because actually, we have a responsibility to exercise some leadership, and I can remember in the early days, when people heard about change, a number of hares were set running and quite clearly we could have excited false expectation around what the new world will look like, and that could be equally challenging to manage in terms of disappointment if people don't get what they want." [Participant A]
“There were individuals in that group who weren’t necessarily as committed to it or signed up to it as others and the end result is people they line managed were less well informed about the process of how it was going to work. So inevitably whether it was doubt or whether it was blockages in the process, but there were definite blockages in the process, that didn’t assist and help us put the change in place which meant there were some people at the grass roots level that didn’t actually understand why it was all happening.” [Participant F]

The final model of restructure was also raised and discussed at a number of different forums with different management teams. On the whole, the end product received good support. The Chief Superintendent then presented it to the Deputy Chief Constable who agreed to its implementation.

Establishment of the new organisational structure facilitated the institutionalising (d) process. In this respect, the neighbourhood policing teams which previously consisted of a community beat manager as well as community beat officers have been reduced to have only one community beat manager, and the community beat officers have been put into either the response team, the crime investigation team, or the crime management team. The major part of the restructure also involved giving clarity around the roles of these officers and defining their functionality. As a result, consistent standardised processes and systems have been put into place throughout the organisation.

“By actually putting the neighbourhood policing team, making it smaller, but defining very tightly in terms of what the role of those officers were, and knowing what the functions were, it actually enabled us, it’s helped moving that to deliver on what the neighbourhood policing teams classically should define.” [Participant D]

“Having gone through the change... we’ve got the lowest crime allocation to staff that we’ve had generally at any point, we’ve got an effective crime management system that sort of weeded out crime, it also gives people scheduled appointments to come in and see us.” [Participant C]

“My view overall is that it’s been a success for the BCU, actually our business processes are standard now, they’re a lot more efficient, we actually can talk about posts and people confidently now.” [Participant D]
“From my point of view the success is that we now have an establishment of our staffing, fully signed off, and we know exactly where everybody is, so that was the thing that was missing in the very beginning, and now we’ve got it.” [Participant H]

After the launch of the new organisational structure in summer 2009, it appeared that there still needed to be minor adjustments as things progressed and people moved to and from different teams. The restructure became a continuous process rather than the implementation of a single decision.

“New demands come in, new analysis, new issues arise, so for instance, in Peter’s world we’ve got to re-adjust and lose some capacity which we had in some proactive teams to support the custody, and just supply in a 24 hour basis support to the rest of the BCU wasn’t possible under the regime, so there has been some refinement, around that.” [Participant D]

Reflecting back on the change process, the main comments by the senior officers were around the lack of consultation, not only between themselves and the staff during the restructuring, but also between the Headquarters and themselves. Their view is that having to apply the chief officers’ parameters on the restructure has taken away some of their own authority in being able to design POA’s new structure from scratch.

“So to an extent I think we might have come up with a slightly different map that would have perhaps mirrored our policing needs greater. So our gut feeling wasn’t taken care of there, we had to go with the map as it was drawn.” [Participant C]

“I think there’s elements of it now that were taken out of our control. For instance the locations and the sectors we have had to come online with mirroring and supporting external structures that have already been put in place.” [Participant C]

Also having gone through the change, there have been a few lessons learnt for the senior officers. They explained what they would do differently in a similar situation in the future:

“The learning is consultation should mean consultation, it shouldn’t mean communication, and if true consultation is about understanding people’s needs and taking a view from that to help steer your options, then that’s what it should be, and therefore there should be a lot of
effort placed in providing the right opportunity, the right environment, the right understanding of staff to engage in that.” [Participant C]

“So for me, two things, get clarity in terms of reference to start, and secondly write time off, get away and deal with it, as opposed to just doing it every week, and then allowing those other things to fester or whatever.” [Participant D]

“...some of those parameters I’d probably have challenged, if I knew that now, where we are now, I’d probably have challenged some of those parameters a bit more at the time, where we are, the benefits we can see, yes there are some benefits, there are some big drawbacks.” [Participant F]

In summary, the performance inefficiencies at POA put pressure on the senior officers initiating the restructure of the business. In the beginning of the process, they brought in external consultants with the intention to analyse the organisation’s demand and supply of policing and find a formula on which they could apply the allocation of resources. With the failure of the analytical route, the senior officers became aware that they needed to employ their experience and knowledge of the business in order to make those decisions which started the process of intuiting (a). Through dialogue and justification of their intuitive judgements, the interpreting (b) process started to take place between the three Chief Inspectors. They’ve developed a shared understanding through discussions and negotiating, and eventually achieved consensus in the integrating (c) process. The establishment of the new restructure facilitated the institutionalising (d) process. Effectively the senior officers’ intuitive judgements have been successfully embedded within the organisation through the implementation of the restructure.

In conclusion, as it has become evident in the analysis of this case, there appears to be an additional process prior to the intuiting process which the researcher called the ‘initiating’ process. This process forms the decision context which acts as a trigger leading to intuiting. Based on this finding, the 4I framework is extended to incorporate this additional process and a 5I framework is developed. Consequently, the decision process presented in this case follows a 5I model in that it flows through initiating, intuiting, interpreting, integrating and institutionalising processes. See Figure 8.1 for the model emerging from this case.
The POA’s senior officers described this decision as an ‘intuitive hit’ as they developed the resource allocation model based on their extensive experience and knowledge of policing, and knowing the business well was what helped them build a model that would work in POA. The institutionalisation of these officers’ intuitive judgements had been a success leading to the perception of increased effectiveness and efficiency in the organisation.

Figure 8.1 Intuitive Hit Case 1 Organisational Learning Process

8.2 Case 2: Cancellation of Event at POB

POB had been planning for more than a year to police a conference which was going to take place in October 2009. This particular operation was over-and-beyond what they would normally do in terms of policing on a day-to-day basis and required planning for all sorts of events such as counter-terrorism, involving a working partnership with a list of other organisations including Group 4 Security, fire and rescue, and ambulance. As part of that, the chief officers at POB put a bid in the Home Office to receive special funding for this big organisational operation,
totalling approximately £6 million in order to cover the entire policing operations during the four-day period of this conference.

This operation involved 1500 police officers including the chief officers with senior command level responsibilities. The operation took place in October 2009, and it had been a success in terms of the conference being able to carry on smoothly without any major incidents, having minimum impact on the local community.

At the end of the operation, in the initiating process, an email was sent out by a Chief Inspector to a list of police officers who took part in the operation, inviting them to a dinner event at a famous hotel for the celebration of the successful police operation to say ‘thank you’ on behalf of POB. The Assistant Chief Constable, Richard, was also on the receiving end of this email as a result of which he has initiated a sequence of actions.

"An email comes out without any, I wasn’t aware of any sort of chain of command actually making that decision... but an email went out to well over a hundred people including partner agencies to invite them to an event at the [hotel], quite a prestigious event and venue in the [town centre], on the 2nd November, for this event, in the hope to see people there." [Participant N]

"Richard picked up an email from the police planner, a middle-ranking middle manager, who was inviting everybody to a £14-16 a head celebration of the successful police operation, that money not being collected from each individual attendee, but incorporated in our overall budget." [Participant L]

As soon as Richard read the email, through the intuiting (a) process, he had an immediate judgement that this was not right. From his point of view his reaction was intuitive which came out as a strong gut feeling, telling him that he needed to act quickly on what was being proposed in this email.

"...I was a recipient of the email, and for me the event just didn’t sound right.” [Participant N]

In order to gather more information and find out about the background of this event he checked with Owen, the Chief Inspector, who sent the email out. It became
apparent that within that £6 million funding for the policing operation £2,500 had been earmarked to cover this event to invite the staff to a ‘nice meal’.

Although previously he would not be concerned about it, Richard intuitively made a connection between what was being proposed (a dinner event at a famous hotel) and all the issues around the budget cuts and public sector finance that were in the news every day. For him, this did not feel right and he was alarmed by how this event would be seen from outside the organisation.

"Richard intuitively felt was poor use of public funds, particularly in the context of recession and the economic challenges that we’re facing." [Participant L]

"Six months ago, a year ago, I wouldn’t have felt the same way, so my intuition would have been different at that point in time, whereas today it doesn’t feel right." [Participant N]

The interpreting (b) process started on the individual level while Richard tried to articulate his gut feeling to himself by making this tacit intuitive judgement explicit. Through this process, he was trying to explain and justify to himself the rationale behind his judgement.

"Where I was coming from initially is that I’m looking out from this, and saying what is the view from outside, so I think in terms of the policing context... our decisions are looking at what’s the impact going to be, particularly in, what they say a single top down target of public confidence and improved public confidence, so for me that was the big look and actually those considerations." [Participant N]

"An apology, but obviously the rationale behind it is that with all those issues that speak about public sector financing, knowing full well that as soon as that email goes out, that we are not water tight as an organisation, but that could be in the local media, so we’ve got to balance those consequences up really from it." [Participant N]

In order to consult a second person, Richard immediately notified Duncan, the Chief Constable at POB, and asked for his point of view, which led to the second episode of intuiting (c). Hearing Richard’s point, similarly Duncan’s immediate intuitive judgement was “this can’t happen”, appearing as a gut feeling which he said “came out as stress”.

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“My immediate reaction and it was intuitive, was to say, and I don’t think I do this very often, but within two minutes of getting the information from Richard, I said ‘this can’t happen.’” [Participant L]

In interpreting (d) his judgement, Duncan explained that his reaction was based on a previous experience 18 months ago where the chief officers had bad publicity when they ran a team meeting at the same hotel. He knew that this event almost certainly would replicate the negative repercussions of the previous one, and they would be in the public eye again with the potentially damaging news to the effect that the police are having a nice meal at the expense of the taxpayer. Duncan further explained that although this sounded like a nice thought to have the opportunity to thank the staff and the partners, and to engage with them in an informal environment, given the economic challenges around public funding, it was absolutely not possible to do this event.

Duncan and Richard were clear about their thoughts regarding this event, however Duncan felt it was important to consult the Director of Finance, Brian, to seek his professional view from a financial point regarding this decision.

“However, I thought well we do have a Director of Finance here, who informally I consider to have almost the conscious of the organisation as part of Brian’s portfolio. I think we all should have that, but when it’s issues of money, and arguably, if you like, and this is over-simplifying Brian’s role, apologies for that Brian, but he holds the purse strings to a certain extent, so therefore I thought that was, and he was here, so it was obvious I thought to get a very quick third opinion, that’s what it was.” [Participant L]

Third episode of intuiting (e) took place with Brian who also had an immediate reaction by saying “no”. In interpreting (f) his judgement, his advice was to not do this event. At the time he did not have many years of experience at POB, therefore his judgement was based on his background and previous experience as a Finance Director in other organisations. Given that, he explained that he wanted to back up his gut feeling by asking for more information and checking with the officers in order to find out what the standard procedure was around this kind of practice at POB.
“Because, actually, I haven’t got a lot of experience around the police at [POB], so instinctively it would have been from my background an absolute no, we shouldn’t do this kind of thing.” [Participant Q]

“So I just did a little bit of checking and questioning around is this a standard, is this the kind of thing that normally happens, is this part of our kind of reward structure, if you like, for these type of events, just to kind of double-check it out.” [Participant Q]

Effectively Richard asked Duncan (who was a more experienced and more senior chief officer) and Duncan asked Brian (who was an expert in financial matters). In this way, all three of them engaged in a group interpretive process developing a sense of shared understanding. It became clear that the chief officers shared a collective gut feeling regarding this event, and consulting each other’s view was a way of validating their individual intuitive judgements.

“Effectively Richard presented to me the issue in a, I think, correct, judgemental way, I mean you’d got a judgement in your mind. And I think I would say Richard was coming to me to confirm, endorse, rubber-stamp that decision, but I suppose I’d got an option, I could have said no I think it’s alright, let it happen.” [Participant L]

“So I didn’t need a lot of persuading and that because it was almost presented to me as we’re not very sure about this, our instinct is not to do it, and almost just really kind of asking me for that kind of further judgement confirmation, which in some ways was quite easy.” [Participant Q]

The integrating (g) process started with a mutual understanding of where they stood as the senior management team in respect to how they would respond to this event. The chief officers’ discussion was not just around the financial costing of the event, more importantly it was about the reputation of the organisation, and the potential adverse publicity which would be targeted at them. For these chief officers, it was important that any decision they took would be seen in compliance with the values of the organisation. Although they believed that the intention for putting such an event out was right from an internal viewpoint, they also ought to consider the matter taking into account the public perception.

“We took a view, again around this table, in very quick time, that actually, even though we could justify every penny, we didn’t want the publicity, and didn’t want to be seen to be criticised last week, as it was a few months ago, and then almost ignore that criticism and still
blandly, blithely go on ahead and have our own little conference spending, what is perceived to be tax payers’ money on having a nice time.” [Participant L]

This collective understanding further confirmed that this was the right decision to take. The chief officers felt certain about it.

“Further I understood it was right to make, and certainly I didn’t go home thinking have I made the right decision.” [Participant N]

“Like Richard I was very confident it was the right thing to do, I did think it was a shame, and I think all the logic, all the responsibilities that go with the office and the public service, the public sector element to our job, I think, confirm in my mind that it was the right decision.” [Participant L]

As the discussions continued, they all agreed that they could not allow this event to take place in the format that it had been suggested. However, on the other hand, they did not want their staff to feel undervalued as a result of having cancelled a ‘nice’ event. In an effort to provide the opportunity to say ‘thank you’ to those who took part in the successful operation, the chief officers considered a few options that would still allow the event to take place without being paid from the operation budget; this way it was not likely to cause any adverse publicity for the organisation.

“So, I’m not sure if it was partly to try and help him save face, because he’d sent this message out, and also with a little bit of mischief in my mind, I think, I thought well if people want to still go to this event, let it happen, they can pay out of their own pocket privately, knowing full well that that wouldn’t promote or create an event at the end of it all.” [Participant L]

“I mean we considered, one, that they pay, the attendees pay themselves, two, that we actually go to a venue in [town] and just have a drink together, but then when we talked around, do you do that, could we do that in terms of the mix of people who’d be coming together, and another one which was even dodgier, I think, was to pass it back to Group 4 Security, which is a private company, and ask them to pay.” [Participant N]

In response to those options Owen’s answer (as the initiator of the idea) came back as “no”. Having thought through all of the options the chief officers suggested, he had decided that the best thing to do was to cancel the event completely.
In consultation with the Press Office, Richard prepared a communication message to publish in case this incident went out into the media. Fortunately, having intuitively recognised the problem and then having responded to it well in advance prevented any adverse publicity that would potentially dent the reputation of the organisation.

When the chief officers reflected on this experience they stated that they felt affirmed in their intuitive judgements which informed their decision making in this particular case.

"The fact that we're all happy with the decision a week later, means that we've got confidence in using intuition. I'm not saying you'd then regret a week later because you think, well maybe I made a poor decision there, so it's kind of, in some ways if you take it as a kind of confidence insurance point that our intuition stands the test of time." [Participant Q]

The chief officers believe that this incident had been a learning experience for everyone involved but particularly for Owen, whose decision has been completely reversed by their reaction. They suggested that Owen would now know better and probably not make the same mistake again.

"But I think, Richard and I certainly had a conversation about Owen, the person on the receiving end of this decision, if you like, who also would be the person who had to really publically show that he'd been brought to book and had his decision completely reversed, so I think I remember asking Richard how does Owen feel about that, and I think you said that he learnt by the experience." [Participant L]

Despite the stress this incident created for the chief officers, they have not developed a formalised procedure around this experience that would inform future decision making in similar occasions. The HR Director asserted that they would not want to establish a principle as a result of this incident for they would want to judge each occasion on its own merit.

"We're not making a principle out of that, which is we'll never spend any money, ever, as it were, on rewarding staff, or saying thank you, or, we'll judge those on their merit kind of thing. Because my instincts would go against that as an overriding principle, I mean it's more sensitive at the moment, that feels an extreme example, but there are other examples where spending a bit of money we might want to justify really, does attract negative publicity." [Participant P]
In summary, in this case the initiating process started by an incoming email from the Chief Inspector inviting people to a dinner event which was going to be paid from the operation budget. As soon as Richard read the email, through intuiting (a) process, he had a gut feeling that this was not right. Interpreting (b) occurred on the individual level whilst Richard tried to make sense of his intuitive judgement by explaining the underlying rationale to himself. He consulted the Chief Constable (a more senior officer) who then consulted the Finance Director (an expert in finance) to seek their views on the matter. At this stage, the Chief Constable and the Finance Director engaged in the intuiting process (c) (e) and interpreted (d) (f) their gut feelings to each other by justifying why they should not go ahead with this event. Through verifying their intuitive judgements they created a shared understanding of the situation, leading to the integrating (g) process, and generated options for the required action that would not jeopardise the organisation’s reputation. In this particular case, the chief officers cancelled the event, however they have not made a formalised procedure to institutionalise this decision. See Figure 8.2 for the organisational learning model emerging from this case.

This decision was an ‘intuitive hit’ for the chief officers of POB. The fact that Richard intuitively recognised a potential problem and followed his gut feeling by acting on it in a timely manner, and eventually cancelling the event prevented adverse publicity which would potentially harm the organisation’s reputation. The collaboration of the chief officers and the harmony in their intuitive judgements appeared to be imperative in this case as it has allowed for a smooth decision making process in order to respond to the incident swiftly.
8.3 Case 3: Introduction of Neighbourhood Policing at POC

In 2004, there was an initiative from the Government for the police organisations in the UK to change the police service nationally and to deliver something called 'neighbourhood policing'. At the time the policing priorities were mainly focusing on matters that were coming from the top of the organisation, such as burglary and vehicle crime, however the public was complaining about being affected by other issues, such as kids running through gardens, smashing the windows, and alcohol consumption on the streets. There was a lack of engagement between the public and the police, and as a result even though generically crime was going down, the public’s perception was that crime was going up. For the Police Organisation C (POC) the initiating process for the national change has started externally with this Government directive.

"I think nationally we’d got crimes coming down, and the fear of crime wasn’t shifting, and it was well what do we need to do?" [Participant R]

"I don’t know if we would have changed had the government not told us to change. And what I say is not us in this room but us the police service nationally." [Participant T]
There was also an internal drive from the senior officers within POC to deliver what the Government was asking them to do.

"At the time I was implementing it, the chief officer who was leading it was very, very clear of this vision, this is what's happening, this is where it's going, there was no doubt about this officer, when he said, that's what I'm doing, you are going to go there." [Participant R]

"I think it was about Christmas 2004 when the Chief Superintendent got me in a corridor and said you are delivering neighbourhood policing and I said what's that and he said not quite sure, but it's a national driver in essence of where we want to go as a Force." [Participant V]

On the local area level at POC, some police officers were getting out into the community, being known to the community and dealing with the community issues, but there was a lack of structure around it and it was not delivered consistently across all the areas. Whilst the beat managers were attending to the day-time problems around people committing to offences during day time in the town centre, they were not able to effectively manage the night time economy. There was no ownership of long-term problem solving such as violence and disorder.

"We had a lot of officers that were responding to demand and just going around and recording crimes, and there wasn't anybody actually out there doing some real street policing, actually challenging bad behaviour and arresting people, prosecuting people and putting us in a position where we could actually respond to some of those criticisms, but we weren't actually tackling some of the problems." [Participant W]

When the Government introduced a new concept of neighbourhood policing they did not provide a 'rule book'; the Police Forces were told to find their own approach in terms of designing and delivering it. Therefore, there was a high level of uncertainty around what it was and how they needed to set it up.

"I don't think there was a Force lead at this point, there was kind of a vacuum of what does it mean to the Force aspect of it... so it was just about trying to figure out what it actually meant to us as individuals." [Participant V]

"So the first decisions were there without a lot of information, without a lot of guidance. It was kind of you interpret this national stuff in the
way that you want to do it locally and find the best way of doing so.”

[Participant R]

At the time there were two pilots nationwide, called ‘reassurance pilots’, with the main objective to find out what would work in a community to reassure them. When POC senior officers first went to look at these two pilots running, they found them to be entirely different from one another, realising that they needed to figure out what would work in their own organisation. Later on these pilots started to show some positive findings:

“There had been what we’d call ‘reassurance pilots’, so what would work in a community to reassure them we were tackling the fear of crime, and what that kind of started to show, dedicated teams, known to the public, delivery, problem solving, getting back to people, was actually a way forward, so that came out of the organisation.”

[Participant R]

This was a completely new understanding for POC officers and required an entire change of perspective. The Chief Superintendent explained the complexity this has presented for them:

“... at that time we were probably very much of, we’d got beat teams but it wasn’t formalised, we determined what we tackled as an organisation, so this term ‘responsive’, we’ve got to find out what the public want, that was probably less of a priority for us, than actually doing what came across and we thought as professionals.”

[Participant R]

“So the real shift at that time, and it seems quite straightforward now, although we’re still working at it, was we’ll go out and ask the public what they think their issues are, and that was kind of, that point, was quite a big thing for us, because well how do they know, there’s all that professional egotism that perhaps comes into it. It was a big shift on behaviours and process really, because we had no mechanism, real mechanism to, on a regular basis, go and speak to the public.”

[Participant R]

“So there is a range of different things, but it literally was a whole change of policing, being managing its own destiny, to saying to the public, you now tell us, and then how do we propose problem solving, which again wasn’t, still isn’t endemic on how you understand something, how you deconstruct it, work out where the key issues are on and then tackle it.” [Participant R]
There was a time pressure imposed on this change process and the short timescale meant that it was important for POC to get something working on the ground fairly quickly which they could then build on as they went along.

"Because we didn't have the time, it was like you've got this to implement, get it done." [Participant R]

Whilst the other Forces in the country were determining their own priorities based on surveys, the POC officers’ gut feeling was that they needed to take a leap of faith and let the public decide on their own priorities. In fact this was a risk to take given that it was never tried before, but the senior officers felt confident that this was what they had to do if they were going to be ‘responsive’ to the concerns of the public and raise confidence in police.

"We gambled and said, yeah, we need to go out and let the public agree the priorities, because other areas in the country, they were kind of determining their own based on surveys, and Roger and myself we're very clear we have to take a leap of faith, if we're really going to get the responsiveness, the public have to have a say." [Participant R]

"So again, I guess the intuition was a) we went for the difficult areas because we thought it would work, b) we kind of let free out in the community, and at a really busy time, we decided to almost commit professional suicide and say we'll abstract these officers and carry the risk." [Participant R]

In the beginning of the intuiting (a) process, the senior officers (the Chief Superintendent Gavin and the Chief Inspector Roger) made use of some research data available at the time such as the findings from the evaluation of the national pilots on neighbourhood policing and other academic research in order to inform their thinking about this new concept. However, they had to rely on their intuitive judgements for the main part in trying to come up with a model of engagement with the public, that would be based on what the public was expecting from them, as became evident in the reassurance pilots.

The senior officers had to find the best way to identify the communities, to find out what their views were, to prioritise the matters that were important to them, to tackle those issues and then to feed back to them. They stated that the intuiting process was
influenced by their many years of experience and training in the police service, and they referred to ‘knowing’ the business given their seniority.

“So the intuition within this example comes down to, well you’ve got to deliver something called neighbourhood policing but make it up as you go along, but in effect we’re going to trust you to come up with the best model of what you do based upon your experience.” [Participant T]

“So there were things that came in right at the start that we knew from the context of the area, that we knew from our experience of the communities as well, and we knew from what probably our levels of knowledge and our engagement were so I had to kind of interact with the communities and also probably some of the levels our staff were at the time because this was a big change for them.” [Participant R]

“I think maybe everybody in here will have a model that they can apply to the decision making, and to some extent, whether or not you can go through it every time, because of some of the training that you’ve done, some of the jobs that you’ve actually worked on, but they’ll be in your thought process regardless, so that will link in with your intuition a lot of the time.” [Participant W]

But I’ll know in my own mind what’s right. I think that’s down to me and my experience across a broad range of issues. [Participant V]

At this stage, as part of the process the senior officers were provided with an advice document, however Gavin and Roger ignored the advice as they wanted to develop what they thought was the right model of engagement for POC, i.e. to let the public determine their own priorities.

“They ignored the advice because their intuition told them to do something different.” [Participant T]

“So the decisions that Roger and I made were quite arbitrary in the first place and what we thought would work in that context.” [Participant R]

The interpreting (b) process began with dialogue between Gavin and Roger who started meeting regularly to discuss things such as how to break down the geographic area into communities, how best to engage with the communities, and the number of priorities they would let the public identify at any one time.
“It started with who are our communities, and that’s what I need Roger to look at. Either you kind of break down this geographic area into communities because we can’t take all of it. So that was the first one and we kind of had a quick decision that it probably should go with the beat areas which was a smaller thing that was already in place, and how do we best engage, and then we had a lot of discussions over how.” [Participant R]

“So it literally was a 20 minute discussion of this is what I think, Roger was, I get that, next time you come back and it was then we met every so often. In the first point we didn’t do any project management, it was like me coming back and going, how far have you got, this is where I’m at. And it’s only later when it was rolled out across the Force, because I think we didn’t want to put a load of obstacles around it, which was kind of let’s see how it takes us.” [Participant R]

In one of those meetings, Gavin drew a model of neighbourhood policing on the board at Roger’s office in an attempt to explain his vision of the neighbourhood policing model at POC. He stated that although his intuitive judgement was informed by some of the readings he had done at the time, the model he was proposing for engagement with the public was nothing more than “just a feel for it”. Effectively, he was trying to interpret his intuitive judgement by putting it visually in a drawing for Roger (who noted later on that he preferred to work with ideas visually, and that he was better able to understand and interpret the information when it was presented to him in a drawing).

“I’ve drawn it on Roger’s board, I think it was a case of I read some of the research documents that were out there at the time, I think that’s what happened. A fair bit of much of what we do and then based on those research documents kind of try to make some sense of what it was out of that and then kind of drew that on Roger’s board.” [Participant R]

“So it was around these are the public biggest areas that we could go to, this is the format of engagement, so we’ll have these meetings every six weeks I think we set at. At those meetings the public can turn up, we’ll listen to their priorities and then we’ll go and tackle them. Probably had no more than three because we tried to work out what we could manage without being overloaded, and again that was kind of just a feel for it more than anything and then what we’ll do is feedback to them at the next meeting.” [Participant R]

Whilst Gavin was able to justify his intuitive judgement to Roger in a simple drawing on the board, he was aware that in order to be able to ‘sell’ it to the more
senior officers in the organisation he needed to translate his gut feeling and present his 'logic'. The highly bureaucratic and hierarchical structure of the organisation meant that he couldn't just say "this feels like the right thing to do", he had to post-hoc rationalise his intuitive judgement and show evidence in order to be able to bring that model into reality.

"Your intuition may be the starting point but then you are going to have to rationalise it, you are going to have to research it, you are going to have to be able to evidence it, or if you're not going to be able to take other people with you you're not actually going to be able to get support for it."

[Participant U]

"...but if you are challenged about what is your rationale for making the decision part of the culture of this organisation means that it would be quite hard to turn around and say 'it just feels like the right thing to do'."

[Participant T]

"Because we've got so many checks and balances within an organisational structure that I think with these things you may have the intuitive feeling about something and well, I think that's right, but there's so many checks and balances that you end up getting almost potentially self-justification, so the rationalisation supports what you think anyway or challenges it."

[Participant S]

Eventually, they developed the model of neighbourhood policing and produced an initial guide-practice that presented the way that they looked at the neighbourhood policing, and what the organisation needed to be able to do in order to achieve that model.

In the integrating (c) process, Gavin and Roger introduced the model to the rest of the senior officers at POC. There was a divisional meeting that took place regularly where the dialogue continued with the rest of the SMT. At this stage, more people started getting involved in the discussions and contributed to the development of the model based on their own experience.

"We've discussed things and put it forward and checked it out with each other, and the person who kind of put it forward as in policing our original start was kind of intuitive and this is what we are doing, we're going to move it on. But as it got negotiated through the organisation, other people chipped in and said this is how we've done it, this is how it works, then it morphed into something that became,
probably still based in what we originally came up with, but morphed into this intelligence part of it now.” [Participant R]

Acceptance of the model was important because its delivery needed to work in a collaborative way not only internally within the organisation but also externally with partners and politicians. Therefore, they started the consulting phase by presenting the model to the representatives of different areas in the organisation, and to the external partners and communities to get their opinion. During this process, the senior officers had to be influential in order to get the other parties’ support on what they were trying to do.

“There was a long process of getting buy-in from upwards as well as at the same rank in the organisation. But ultimately people could see the benefits of what was being suggested.” [Participant W]

“We managed to persuade local community workers to help us do the meetings, because some communities weren’t ready to engage with the police at that time, so they did it on our behalf, and that was another kind of leap of faith for them, as much for us.” [Participant R]

“I think persuading some politicians that it was important to get to the wider community to find their issues, rather than having to just come through dedicated things, so there were structures in place, but they weren’t probably as inclusive as they could have been.” [Participant R]

The senior officers drew attention to the importance of leadership in this process and stated that it was due to their credibility within and outside the organisation that they were able to get other people’s confidence in the leadership’s decisions.

“The other interesting thing is whether people will follow it because they’ve got to have confidence in the leadership.” [Participant V]

“One issue is a leap of faith, and that if you have a leap of faith, other people have got to have faith in you that you are making the right leap. And so you can have all the intuitive decisions you like, if you are seen as an idiot, people will not...” [Participant V]

Although the senior officers were successful in getting buy-in from senior colleagues and colleagues at the same rank, the biggest difficulty they had was about communicating with the ‘grass roots’ levels and getting them to understand what neighbourhood policing was all about and how it would work. They had tried to
communicate their ideas widely within the organisation, however it appeared that not everyone bought into the idea of community engagement and letting the public identify their own priorities.

"The key bit in terms of intuitive leadership is if it’s not connected with good communication then it can fail. Because you can’t make the connection where you’ve gone with your intuition into actually why you need to do it in the first place and that’s what we ended up doing a lot with trying to talk to people about why." [Participant R]

"When you look across the whole of the organisation, there aren’t that many people that have actually got that degree of vision about what it all means, and even though we’ve spent a lot of time and effort in trying to communicate that." [Participant W]

In the institutionalising (d) process, the organisation has invested in teams which have become the core of neighbourhood policing in maintaining regular engagement, problem solving and positive enforcement with the communities. These processes were reinforced by the development and embedding of structures, strategies, systems and standard procedures around the delivery of neighbourhood policing. The standards that have been set at POC have also been set nationally at a later stage through the Policing Pledge in order to provide consistent delivery of neighbourhood policing throughout the country.

"We have neighbourhood teams across the whole county now, if you were looking right now, almost following the same procedure that we started with after 20 minutes, even the national level is not far off that 20 minute chat." [Participant R]

"We have engagement strategies, we have neighbourhood policing plans, we have websites, we have computer packages, to look at problem solving, we have regular processes around the inter-communities, types of poster that can go out, everything is regularised now." [Participant R]

"The Policing Pledge has evolved out of kind of what we’re doing on neighbourhood policing, and what was called a Quality Service Commitment, so they’ve kind of come together to equal the Policing Pledge." [Participant R]

The concept of neighbourhood policing was established in 2005, however the model still keeps getting reviewed and adjusted regularly. It has recently gone through a series of changes since it needs to be kept up to date as the context keeps changing.
(such as the continually changing demands from the communities and the Government, and the shifting goals of the organisation). As the organisation moves forward, their communication plan has also evolved; now they are making more use of the technology by developing websites to keep the public posted on issues concerning their neighbourhoods. POC is now also looking into social marketing in order to give the right messages to the communities and communicate their engagement plan more effectively. Also internally, the senior officers are trying hard to get the right people and influence the behaviour change within the organisation by reinforcing process changes.

“You’ve got to keep interpreting the future, even if you’ve gone with one decision or one model, say, if everything’s changing, how do I keep it up to date, and I think that’s probably where we need to kind of keep looking at, how do we continually evolve this, keep looking at it, and understanding the context to agree with it, so the models will be right, but we’ve got to keep kind of refining it, to tailor it to the context.” [Participant R]

“It’s kind of an evolving intuition, in a business sense, because how do we know, how do we change it again, to keep up with the new context.” [Participant R]

On reflection, according to the senior officers, this process has fundamentally changed their perspective from looking inwards to looking outside to the world, and it has been a move away for POC from focusing on crime reduction to quality of life matters. Even though the implementation of the model has proved successful with the increasing satisfaction figures in the communities, there is still room for improvement within the organisation in terms of behaviour change which is necessary for the model to be fully embedded. Finally, the senior officers commented that they feel affirmed in their intuitive judgements given that the projections they made at the beginning of the process are still the core of the model on which the delivery of neighbourhood policing is based.

“I think we’ve changed the way [POC] police in some fundamental understanding of it. We’ve turned it from internal to external, and listening to different audiences, because Mike’s audience is different, you see, to mine, it appears different. We’ve broadly set this organisation to look outwards, rather than continue to look inwards.” [Participant V]
“... we’ve brought a lot of complexity in, but really simply, do you know your area, do you engage effectively, do you identify key issues, do you tackle it, and do you tell them that you’ve done it, but we’ve never really got that fully embedded. So I think the behaviour change didn’t happen, and probably we’ve got some people who don’t feel comfortable in this move, and the second bit of the processes and our constant leadership, I mean consistency in leadership to make it happen, they’re the bits that I think are missing.” [Participant R]

“The fact that we meet every six weeks to determine three priorities which is what we started with that is maintaining engagement, and around problem solving, it’s still at the centre, so we weren’t far off on the intuitive bit.” [Participant R]

Having gone through the process, the senior officers asserted that this process has been a learning experience. They are now able to see the strengths and the weaknesses of the process they have been through. They have identified certain things that they would now do differently which are mainly around the selection and development of the officers and staff, and the necessity of earlier engagement with the partners to work in closer collaboration.

“I think we probably would have had a wholesale selection process for it, rather than trying to build on people who were already there, so again it would have been a selection, de-selection process, saying have you got the skill sets to deliver what’s important.” [Participant R]

“I think if we were going to go back in time, I think the gut was barely internal, and we did it initially very much within policing, I think if we were going to go back and look at it again, it’s all about context at the time, means we’d probably try to bring wider agencies on earlier than we did, so it became very much a neighbourhood provision completely, rather than by communities. So with hindsight, and that wasn’t generally in the wider context at that time, making a partnership, maybe that’s the bit that if we went back and rationally re-looked at it, with hindsight, then that would have been the difference.” [Participant R]

In summary, the Government directive to establish neighbourhood policing in the UK started the initiating process for change at POC. This was a completely new concept at the time, and the senior officers were told to design and deliver their own model without much guidance. Whilst they used some of the analytical data available, the Chief Superintendent and the Chief Inspector, through intuiting (a),
created a model of engagement with the public whereby the key element was to let
the public determine the priorities that the police would tackle. In the interpreting (b)
process, Gavin explained his vision of neighbourhood policing to Roger visually by
drawing a model, however he had to post-rationalise his intuitive projections in order
to be able to ‘sell’ his ideas to the rest of the organisation and to the external
partners. In the integrating (c) process, they were able to get buy-in inside and
outside the organisation which they attributed to their credibility as effective leaders.
Embedding structures, systems and strategies around neighbourhood policing
facilitated the successful institutionalising (d) of the model which was primarily
built on intuitive judgements. The organisational learning process in this case follows
the 5I framework as shown in Figure 8.3.

According to the senior officers, this decision has been an ‘intuitive hit’ since the
model they came up with has been a positive move away from focusing on the
organisation to responding to public’s priorities which eventually led to increasing
satisfaction figures in the communities. Although their strategies keep getting
adjusted to fit the emerging contexts, the fact that the intuitive building blocks are
still very much at the core of the model, makes this decision a success.

Figure 8.3 Intuitive Hit Case 3 Organisational Learning Process
8.4 Conclusion

This chapter presented the research findings emerging from the investigation of three decision making processes at three police organisations. These cases were described by the participants as ‘intuitive hits’ as the decisions were based on intuitive judgements which led to effective outcomes for their respective organisations.

Analysis of these cases from the perspective of 4I organisational learning framework revealed the following findings:

- A significant finding in this chapter is that, as it has become evident in the analysis of all three cases, there appears to be an additional process prior to the intuiting process referred to as the ‘initiating’ process (I₀). This process forms the decision context which acts as a trigger leading to the intuiting process. Based on this finding, the original 4I framework is extended to incorporate this additional element thereby developing 4I into a 5I framework.

- There appears to be a process of analysing, to the extent of varying degrees in different circumstances, which takes place either prior to, after, or in parallel with intuiting process. In Case 1, analysing occurred prior to intuiting whereby the failure of attempts to develop a resourcing formula solely based on analysis led to the intuiting process by the senior officers. In Case 2, analysing occurred after the officer had a gut feeling about the situation by way of trying to gather more information. In Case 3, the senior officers employed their intuitive judgements alongside using analytical data.

- Intuition is referred to as coming from the experience and prior learning of the officers which is mostly attributed to their professional seniority. In Case 1, the senior officers referred to intuition as ‘professional judgement’ which they explained as knowing the business and being able to make informed judgements. There is also mention of intuition as a ‘gut feeling’. In Case 2, the officers stated that intuitive judgement came out as stress, i.e. negatively charged feeling. Also
- In Case 2, there appears to be recurring episodes of intuiting and interpreting as more people become involved in the decision process indicating that organisational learning is not a linear process.

- It is evident in all three cases that interpreting involves 'talk' with the self and dialogue with others, and explanation of intuitive judgements by way of justifying the underlying rationale. It is also observed that visual interpretation helps to articulate tacit knowledge. In Case 3, the senior officer was able to explain his intuitive judgement by drawing the visual image he had in his mind on the white board, i.e. making tacit knowledge explicit.

- There is evidence that in order for the officers to influence the more senior officers, in the interpreting process they needed to post-hoc rationalise their intuitions. In Case 3, the officers commented on not being able to say "it just feels like it", they had to rationalise their argument to make it acceptable to others.

- There appears to be various group decision making processes occurring in the integrating process. The most common ones occurring across cases include generating options, communicating, negotiating, consulting, and influencing. It is observed that management team members or people outside the senior management team are consulted based on their expertise of the subject, and may become involved to contribute to the decision making process. Whilst disagreement amongst the team members appears to be common, reaching consensus plays a significant role in developing a shared understanding and taking coherent action.

- Contrary to the original 4I framework, it is evident that the learning does not always get institutionalised within the organisation. In Case 2, the officers have not developed formalised procedures as a result of this incident.
In Case 1 and Case 3, the learning has been institutionalised within the respective organisations. In these cases it also appears that the senior teams made further adjusting to the embedded systems and structures to keep up with the changing context.

It is observed that the officers reflected on their respective decision making processes by noting the weaknesses encountered and what they would do differently in the future in order to improve their decision making processes.

The implications of these findings are discussed in detail in Chapter 10.
Chapter 9  Study 2b: Intuitive Misses

9.0 Introduction

This chapter presents the second part of Study 2 of the research. There are three case studies of decision making processes that took place at the same police organisations as in the previous chapter. These cases are referred to as ‘intuitive misses’ as these decisions were described by the participants to have involved ‘intuitions’ as a response to a critical incident and were judged to have had ineffective outcomes.

The procedure followed in analysing and reporting these case studies is the same as described for the ‘intuitive hits’ in Chapter 8. The complete list of the categorisation of the thought units from the interviews relating to ‘intuitive misses’ is presented in Appendix 7.

9.1 Case 1: The POA Police Enter the Wrong House

In May 2009, POA was preparing to undertake the execution of multiple search warrants as part of a ‘week of action’ against drug dealers at a number of addresses which the intelligence unit provided them to target. The initiating factor for this incident was that one of the addresses that the operations team was given had strong intelligence coming through continuously from January through April from various sources which detailed that a number of well-known drug dealers who were selling drugs in and around the town centre were linked to this particular address.

"January until about April time the intelligence was coming through about the person who lived at the address, not specifically about the address, and it was a lady who was living at the address who was letting all these people come in and sell drugs from there. So the intelligence was coming in that she was actively having people round to her house, and that drugs were being sold from the premises."

[Participant J]

"More than one report came in from more than one source and the providence of the intelligence was good, a lot of the intelligence that
was coming in was from sources that have been previously sort of tried and tested as it were, by the police.” [Participant K]

This was not a time-critical incident, that is to say, they did not have to rush to force entry to the address, they could do it in ‘slow time’. Most importantly, they needed to make sure that the intelligence they received was accurate and also that they executed the search at the right time.

Prior to the ‘week of action’, Sergeant Alex sent officers to the address several times to walk around the house in plain clothes in order to check if there was any activity in and around the address. Police Constable Steve, who was leading this drugs search operation, also went to the address couple of days before the execution of the search. The initial intuitions (a) process started during Steve’s scanning of the address. Looking at and around the house, Steve’s gut feeling was that there was certainly drug activity going on at this address especially based on his previous experience of places used by drug dealers, it matched the prototype he had in his mind. In interpreting (b) his judgement, he explained that the curtains were always closed, the garden was a mess and from what it looked, the state of the address corroborated the intelligence they were receiving.

“It’s just I’m going, in my head, I’ve got this address, this is the address that I’m going to hit on a drugs warrant, so I’m just looking to corroborate what I’ve been told is I’m to expect inside, and from what I looked at it, in my mind it corroborated it.” [Participant K]

“Yeah, you know, it’s not a nice address with the curtains drawn and flowers on the window sill, and, yeah, it looks like a drugs address, I’ll be happy with that.” [Participant K]

“People live how they live, don’t they, but we go into enough addresses that are used by drug addicts, and more often than not drug addicts will keep their curtains closed, and more often than not, drug addicts maybe don’t do their washing up, and they’ve got rubbish strewn all over the kitchen, and from what these guys saw when they did the little recce’s on the address, that’s what it looked like.” [Participant J]

As with any intelligence the organisation receives, this one also had to be analysed and corroborated to get evidence from at least two reliable sources. In this respect, in addition to Steve and his colleagues checking around the house, the intelligence unit
had done some regular checks on the address and also gathered source information from people previously tried and tested by the police. The information confirmed the intelligence received about the drug activity at this particular address.

"Any information coming in we start grading that information, even if we have AI fantastic information that we’re really sure was true, we would still look to corroborate that evidence. We will still look for evidence or information from another source, another route." [Participant F]

After seeking his Inspector’s agreement, Steve spoke to three Magistrates (as per the regulation) at the Court about the information received and what his intentions were. The Magistrates agreed and signed the warrant giving permission to the operations team to force entry to the address in question to search for drugs.

Steve and his team were highly experienced officers in executing drugs search warrants and had high success rates in similar jobs. As far as he was concerned, it was just another job that they were going to attend. His comment suggested that they did not put a lot of conscious effort into this operation as they were fairly confident in what they were doing.

"We do a lot of these warrants, it’s bread and butter for us, isn’t it, and it’s not an issue potentially, we weren’t as cautious and as worried about it, because it’s our bread and butter..." [Participant K]

On the operation day, the execution of the warrant was perfect: the entry into the address was quick, the address was secured quickly, two people in the address were detained and handcuffed as they would do in every drugs warrant arrest. But there was only one problem; these were not the subjects of the warrant the police were looking for. The second episode of intuitions (c) occurred as soon as the officers entered the house. Alex’s immediate gut feeling was that this was not the right address. She explained that she has dealt with one of the subjects of the warrant before so she knew who they were looking for. Therefore, she immediately ordered to un-handcuff the young couple and cleared the officers out of the premises.

"It’s a gut feeling, the second, the second we got into the house, my gut feeling was that, I saw the bloke that was there, my gut feeling the second we got into the house is “oh my God, it’s either the wrong
address or the people aren’t here anymore”, the second we got in.” [Participant J]

“When I got inside, it’s pretty instant, wrong address.” [Participant K]

As it became clear after the operation took place, the subjects of the warrant had moved out of the address some time ago but when stopped by the police they kept giving this address as their residence, and still had their cars registered to that address. Hence, in the intelligence unit’s database this information appeared to be current but in fact it was inaccurate. Additionally, contrary to what was assumed by the operations team, the intelligence unit has not done a comprehensive investigation to confirm that the subjects were current residents at the address in question. The Sergeant explained that normally more search would be done before going on an operation, however since there were many addresses to target that week, the officers could not carry out a thorough investigation on the subjects of this particular warrant.

“...there were less [checks] carried out on this than there would have been. Yeah, normally, at the very least you check who’s paying the Council Tax, and whether anyone from that address is claiming benefits.” [Participant J]

Since it was a week of action, the police invited the local press to go along with them as they were expecting that there would be successful drugs arrests to provide positive coverage. In fact, this led to a damaging story on the front page of the local newspaper the next day, creating a PR nightmare for the senior team and great embarrassment for the operations team.

With the failure of the operation, Alex had to speak to the Duty Inspector and one of the Superintendents to inform them about what they had done and what had happened. This started the interpreting (d) process through dialogue with the higher-ranking officers. She had to write reports and attend meetings in order to explain how the events unfolded, and to justify the reasons behind their actions on behalf of her team. She expressed her justification:

“...you can’t go in and say, just because there’s a young couple and a baby, you can’t say, well there’s no way that this can be linked to
drugs, because unfortunately so many people out there will, with babies, will sell drugs.” [Participant J]

“Until we know exactly that it’s definitely the wrong address, we have to treat everything as if it was the right address, so that’s what we did.” [Participant J]

The damaging news in the media about the police being incompetent and entering the wrong house impacted on the confidence of the public in the police, and therefore the management had to restore the external reputation of the organisation as quickly as possible. Also, internally they felt that they needed to do something about the officers concerned whose confidence and reputation were also dented.

The third episode of intuiting (e) occurred this time by the senior officers when they became involved in this incident. The Chief Superintendent explained that their response to the media and to the officers leading the operations team was based on their intuitive judgement on how they should handle the situation.

“I think that, on a number of different levels there, we exercised gut feeling in terms of how we responded to it, so there was the external management of the media and reputation, there was also the internal management of the staff concerned.” [Participant A]

The interpreting (f) process took place through dialogue between the senior officers and justification of their intuitive judgements. In their discussions they stated that from a rational point of view there was a neglect of duty on Steve and Alex’s part – it was their responsibility to make sure all the checks were done on the address before entering the house. On the other hand, the gut feeling was telling them that they needed to consider the reputations of these officers who were actually good, high-performing officers with very high success rates.

“I mean you could write it down and rationalise why you’ve come to that conclusion, but a lot of it is about gut feeling and intuition in terms of how you react.” [Participant A]

Therefore, the senior officers’ collective view was that it was the management’s responsibility to exercise discretion, rather than punish these officers for their mistake. This was the common ground for the senior officers’ justification.
"I don't think that Steve gambled with our reputation, he did what he thought was the right thing, okay, in an ideal world he should have made some more checks, before he left the police station to execute the warrant, and that's the learning for him, but he didn't gamble with our reputation, and as I say he's done many, many warrants and produced some excellent results." [Participant A]

"Knowing the individuals, their punishment of themselves for getting it wrong will be probably far more than anything I could do to them, and was it right for us to have taken them through a discipline, or taken any form of sanction against them, when in actual fact, in the cold light of day what they're trying to do is do their job to the best of their ability, and the pair of them normally do get it right."

[Participant F]

"...that's an intuitive response, isn't it, because strictly speaking there is a neglect of duty which could have resulted in more formal sanctions in terms of misconduct, but you make a value judgement, don't you, in terms of the individuals concerned, their personal reputations, their productivity, and how they do business, and recognising that they are 99.9% of the time highly effective people, you make that intuitive assessment." [Participant A]

The senior officers further justified their views by stating that they needed to be proportionate in their response since they did not want to create a climate within the organisation whereby the officers would be afraid to take decisions in similar situations.

"So if we start being seen to act against someone who's made decisions for the right reasons, with the right intentions, although it was wrong, we would really start getting ourselves in trouble, in the fact that our police officers have to make decisions, today, everyday."

[Participant F]

"If we were to be more draconian or authoritarian in our response, actually would you be prepared to take a risk or to put yourself out on a limb if you thought that if it went wrong for no fault of your own you'll be in trouble. If you made the same mistakes time and time again then that obviously would be a different matter." [Participant A]

In the integrating (g) process the senior officers all agreed on the course of action they were going to take in order to resolve the situation: they had to put their 'hands up' and accept accountability for the mistake as an organisation, and offer reassurance to the broader community for not repeating the mistake again.
“I think that, in this particular case, it was just as much a systemic failure as it was an individual failure.” [Participant A]

“Intuitively the right thing to do was just say, we’re really, really sorry, we got it wrong, we’ll do what we can to put it right.” [Participant A]

This incident had a negative impact on POA, and the news about this incident also spread within the organisation through rumour very quickly and became very well known.

“This sort of incident flies around the BCU, everybody knows about this, because we’ve got it wrong, it’s embarrassing, people don’t like to be involved in it, and everybody learns from it, and this flew round the BCU like wildfire.” [Participant F]

The senior officers felt that to minimise the effects on the reputation of the police officers concerned, they had to empower them to acknowledge the error, learn the lesson and continue doing the good work. The senior officers wanted to give the message that high-performing individuals were valued within the organisation. Given the values the senior officers would want to promote within the organisation (primarily trust, having faith in each other, and empowering individuals to deliver), it was important that this message would encourage all the officers to not abstain from making proactive decisions which was vital for the effective and successful performance of POA.

“They knew they’d done wrong, but it was just as much about building them up and encouraging them to respond to it, so they take the learning but move on, rather than just dwell on the mistake.” [Participant A]

“We empower and entrust our people to do that which I think is the right thing to do, and when you’ve got a highly motivated individual, such as Steve, who’s got a good track record, you want, you encourage your people to be successful, so there is this delegation and it really is empowerment, trusting our people to go and do a good job.” [Participant A]

In hindsight, the officers who carried out the operation reflected that they should have done more checks to make absolutely sure that the information given to them by the intelligence unit was accurate. They stated that this mistake would have been
easily avoided if all the investigations were carried out, however due to the number of the search warrants they were executing during the 'week of action' this was not possible to do.

"We’ve said, just tell us a handful of addresses, and we’ll carry out warrants at all of them, maybe rightly or wrongly we assumed that the intelligence unit, prior to giving us a pack of information, saying right this is for this address, this is for this address, had carried out those checks, so we didn’t carry them out ourselves. Maybe it was because of the amount of them that we had that it would have been too time consuming to carry out all of the checks." [Participant J]

"At the right address, where everything was right, it was still a mistake, because there were a few checks that went undone, and potentially we could have avoided going through that door on the morning that we did." [Participant J]

This incident was a hard-learnt lesson for the officers involved. As a result of this experience, they now recognise that in the future they have to make sure that all the checks are carried out fully. Being the more senior officer in the operations team, Alex reflected on her learning for future reference:

"But you know, it’s not necessarily down to the individual officers, it’s maybe for me to liaise with the intelligence unit, find out what checks have been done, etcetera, and yeah, the learning for me is massive that we check everything before we go in, because maybe for me it’s had more impact on me, because I’m the one who’s had to write all the reports, and go to all the meetings and stuff like that.” [Participant J]

On the other hand, whilst the senior officers developed instructions around what the operational officers ought to do before they go out on a search warrant, they have not established any formal procedures or systems since this was only a one-time incident. The senior officers stated that due to the high profile of this incident, they trust that everyone in the organisation has learnt from it. According to the senior officers, there is an implicit learning in the form of shared understanding within the organisation that would prevent the same mistake happening again as no one wants to be associated with a negative incident like this one.

"... thankfully this is one of those once in a 'blue moon' events, as opposed to something, if it happened all the time I would be really, really anxious, and we would be putting in place more stringent
checks and balances before people went out executing warrants.” [Participant A]

“No, I wouldn’t say we’ve sort of reformulated the way we do our business, no we haven’t. Is virtually everyone within the BCU aware of this incident, yes they are. Is there an element of making sure that before a warrant is signed off, it should go through an Inspector who verifies the information is there. So there are instructions issued around making sure that we got the information was up-to-date and relevant, and so before you sign this, you can go and apply for this warrant, is this information current, and relevant?” [Participant F]

In summary, the intelligence received about ongoing drugs activity at a certain address initiated the decision process in this case. Looking at the house, the police officer’s gut feeling, through intuiting (a), led him to interpret (b) that the address looked like it was being used by drug dealers. However, on the day of the operation, when the operations team forced entry into the house the Sergeant immediately knew that this was the wrong address through a fast intuiting (c) process. In interpreting (d) the situation, she had to justify their actions to more senior officers. The failure of this operation initiated the intuiting (e) process for the senior officers who stated that their decisions on how to handle this incident were based on their gut feeling. In the interpreting (f) process the senior officers justified their intuitive judgements to each other, expressing why they would not punish the officers involved although the rational thinking would suggest that there has been a neglect of duty on their part. The adverse publicity about this incident damaged not only the organisation’s reputation but also the officers’ involved. In the integrating (g) process, the senior officers accepted accountability for this mistake as an organisation in order to provide assurance to the public that this will not be repeated again. Equally important was empowering these officers who were known to be high performing and successful. Although this incident had a negative impact on the organisation, the learning has not been institutionalised formally, it has been limited to the instructions around making sure that every possible check is done before going on a drugs search.

In this case, there seems to be two parallel decision making processes. The first one is prior to the operation by the operational officers, and the second one involves the SMT’s decision process which was initiated by the failure of the operation in the
aftermath of the incident. Accordingly the decision process emerging from this case in presented in Figure 9.1.

This case is an example of an ‘intuitive miss’ whereby relying on the inaccurate information provided by the intelligence unit as a result of lack of investigation led to an unsuccessful drugs search. Although Steve was certain about his gut feeling that the address looked like a drugs dealer’s house, his comments about drugs searching being their ‘bread and butter’ indicates that they were not very cautious (i.e. he was thinking automatically). Having been informed that this address was used by drugs dealers, it could be argued that he was nonconsciously making a biased judgement, and therefore he had not given it any consideration that it might not have been a drugs dealer’s address. As a result his gut feeling had failed him.

![Figure 9.1 Intuitive Miss Case 1 Organisational Learning Process](image)

9.2 Case 2: ‘Colour-Matching’ Event at POB

POB have grown various groups within the organisation one of which is a support group for women police officers and police staff called Advance. Its main objective is to help raise the profile of women within the organisation and promote issues about women employees. Advance currently have a large number of members and
they encourage women to join them to network together and develop ideas in ways which could improve work related matters for women. Advance is led by a Superintendent and run by a small committee of four people. They have previously run a number of events, put on conferences on key topics that were particularly of interest to women. They also had an upcoming networking event, Health and Wellbeing Day, that would cover a mixture of topics to do with general well-being, including work/life balance, professional skills, and maternity rights, where several professionals were invited to talk about issues directed towards women. One of the sessions they were planning to do at this event was what they called 'colour-matching' where a professional was invited to give advice on how women should dress to present themselves at work, part of which was about what colours to wear to look their best.

Support groups, like Advance, are fully supported and funded by the chief officers group, and for events like the Health and Wellbeing Day normal practice would be to seek the HR Director Karen’s approval for the agenda and the budget well in advance of the event. Karen, as a female senior staff as well as being a member of the chief officers group, has always been supportive of and participated in Advance’s functions, however she was aware that the freedom they have given this support group sometimes meant that they were doing things in the name of the organisation which were not thoroughly thought through.

"In a way we kind of gave them quite a bit of free rein about getting themselves going, and a bit of self determination, although I would say, within that, we were already beginning to feel like some of that freedom, sometimes meant they were kind of doing things that perhaps hadn't been properly thought through, or the consequences hadn't been properly thought through, or sometimes crossing over with other people." [Participant P]

The initiating process started when Mary, the Head of Advance, sent out a Force-wide email two weeks before the event to announce the programme for the Health and Wellbeing Day. This was the first time Karen had heard of this forthcoming event as Advance has not consulted or communicated their plans about it with the HR Office.
“Advance in their enthusiasm rushed ahead and came up with lots of things and publicised things before they had talked to us about that, and that was a problem, and that partly led to the problem that we got.” [Participant P]

“The first I knew of this, sort of live issue, was seeing through my own email system, or somebody showing me. It had been publicised across the Force, the programme for the day, and that was the first I knew of this, what the programme was. It was issued very late in the day, it was a very poor piece of paper really, it wasn’t a proper programme, I think they were in a bit of rush, and that was the first I’d heard of it, and it had then gone Force-wide.” [Participant P]

When Karen received the email, she immediately spotted the colour-matching session and she was alarmed by it. She asserted that, in the intuiting (a) process, her reaction came out as an immediate gut feeling that this was not appropriate, it did not feel right for her. She intuitively felt that this session would be seen wrongly from outside and cause adverse publicity for the organisation.

“I was horrified, I was horrified, and I said oh no, and I hit my forehead like you do, and I said that’s awful, that’s an honest... that was my gut reaction, oh no, we shot ourselves in the foot, when I saw the bit that said about having your colour profiles done, I was quite dismayed at the general layout of the thing, but I immediately spotted that particular thing, and just the way the whole programme was set out, in my view was not appropriate, and I felt embarrassed about it, if I’m honest.” [Participant P]

“... so I just felt, on those grounds, and my instincts told me that this was going to create adverse publicity and give it a bad name.” [Participant P]

According to Karen, as the HR Director, she could see that this was not positioned properly as an event and the proper protocols had not been followed, however most importantly for her as a female professional who had responsibility for supporting this group, she felt embarrassed about having a session at the Health and Wellbeing Day which was showcased as colour-matching.

Karen immediately spoke to one of her HR team members who also sat on the Advance Board and asked her about her involvement in the organisation of this event. It appeared that the planning for this event took place during a meeting which this person was not able to attend, therefore she also was not aware of it. Karen
asked her to go and have a chat with Mary in order to get more information about this particular session.

A few days later, the Health and Wellbeing Day had come up in a regular report from the Communications Office at the chief officers’ meeting which prompted Karen to mention about the colour-matching session and express her concern about it. This started dialogue between the chief officers on this matter and they had a short discussion around whether they should support and allow this session to take place or not.

“I think that was probably just less than a fortnight before the event. Yes, that was the Monday, I said to Chief – but that was before I realised we were going to hit the national press – that I wouldn’t be surprised if we got some adverse publicity about it, and then by the middle of that week, the Wednesday, which I think is only a week or ten days before the actual event, all that adverse publicity hit us.”  
[Participant P]

In the interpreting (b) process, whilst Chief Constable Duncan did not express a view, Karen and Assistant Chief Constable Tom were very clear to say that they did not think this should go ahead as this would be seen as the wrong thing to be associated with for POB. Karen felt very strongly about it, stating that “it will be seen as just vanity and frippery and nonsense, and what on earth are we doing that for!”.  

However, in particular the Assistant Chief Constable Lorraine, led by her intuiting (c), had a completely different opinion about the situation. As a result, she expressed how strongly she felt that it was important for the women officers to have this kind of opportunity to learn how to present themselves in a male-dominated workplace. She was basing her intuitive judgement on her own experience along the years as a female police officer who currently was the only female senior police officer in the chief officers group.

“I think sat upon the fact that I know, I know obviously from personal experience, and I’m very involved, throughout my career in the issues of female police officers, they are very much alive... so in that sense yeah, I was basing that on experience, and previous experience along the years.”  [Participant O]
"...because for me I felt, from my own professional background it's really important that we do this kind of thing, it's really important that female staff understand this kind of thing, yes we might be taking a risk around it, but we ought to be doing it." [Participant O]

Lorraine felt there was nothing wrong with what was being proposed, for her this session was about giving female police officers the opportunity to present themselves well in the workplace. In the interpreting (d) process, she justified her intuitive judgement based on her own experience that, as a woman senior police officer, she felt strongly that the female officers needed to learn how to feel competent and confident as women in policing. This was one way to help them feel empowered.

"I know that how people present, especially when you're looking to go into some areas of policing like the CID, which is very under-represented by women, the culture is very strong around having to conform, and there are lots of great people who are looking to break that. But the reality is that when you're looking at it from the outside in, you see people, largely white people, largely male people, looking like a certain way, and actually that's not the only way to succeed. It was about trying to kind of challenge those stereotypes." [Participant O]

"It's really around presentation, when you're not in your uniform, and of course that's very much linked to self confidence, you have a sense of how you feel, and of course in a male dominated environment that's really important. So it was about how they project, how they present in the workplace." [Participant O]

"Because I feel really strongly, and felt really strongly about women being women in policing, and not turning into men, and this is one way of helping them feel empowered to do that, and I am the only female police officer in the chief officer team, there aren't many very senior police officer women in the country, and so I do kind of speak up on these things, and that's the reason." [Participant O]

During this discussion, there were two conflicting intuitions regarding the colour-matching session around the chief officers' table. Karen's gut feeling was telling her that this is not right, and she felt very uncomfortable with it. Lorraine explained that at the chief officers' meeting Karen came across as extremely nervous about this session, suggesting that her gut feeling was strong and negatively charged.
"...she had an anxiety about this one particular session on colours, and about how it might come across, that we'd be seen as what on earth are police doing working out what colour suits them, just get on and do some policing kind of thing, in terms of how they come across maybe in the press, or in the public eye." [Participant O]

“She had real anxiety about it, and it transpires she was right, but a couple of others shared her anxiety.” [Participant O]

Karen justified her intuitive judgement to the chief officers by saying that for her this was not appropriate and not relevant to the workplace, and it did not make any connections in terms of helping women be more confident to present themselves in the workplace.

“I thought it was inappropriate, it didn’t look professional, it didn’t make the connections between, it could have potentially made some connection, but it didn’t attempt to make the connections between work and having your colours done, it looked like a jolly, and I think that creates a bad reputation, poor reputation for those sorts of events where they are about supporting women at work.” [Participant P]

“... for me, I think I would draw the line, I would say that it’s not appropriate as part of a professional work conference to have your colours done... I mean somebody give you some advice on what colour suits your skin etcetera, that feels to me like that’s a personal thing, not a work thing.” [Participant P]

In the beginning of the integrating (e) process, there was a clear disagreement around this matter. Whilst Karen argued that this would be seen wrongly and create a bad reputation for POB, Lorraine did not see any problem with running this session. Eventually Lorraine influenced the rest of the team with her contrary argument about why this session was important, and it was agreed that they would support this event. Although Karen understood Lorraine’s point of view, she was still concerned about the potential consequences.

“I managed to convince my colleagues to go with it, whereas actually their feeling is the right one.” [Participant O]

“So I explained why it was important, that it wasn’t just about frippery, it was really, it was about presentation and confidence, and they said, oh right o, and they got it, they understood where I was coming from, and they said, in that case, fine, but they, their disquiet
was very real for them, and as it was they were right, and I was wrong in terms of how it was received.” [Participant O]

“At the time they were persuaded by my kind of contrary argument really, but they were, they understood why Mary suggested it, they understood the motivation being a right motivation once we talked about it, but they were concerned about how it would be perceived.” [Participant O]

A few days after this meeting, the Head of Media Communications went to Karen’s office to show her the news – the colour-matching session made the national press with very damaging publicity. It was portrayed exactly as Karen had thought.

“It made national press over a couple of days in the newspapers, and it was things like, women police choosing which colour scarf to wear, which was, it was really having a go at us around why aren’t you out there catching burglars, why have you got time to do this, the age old criticism that comes our way. So those are the kind of comments, and of course what that then focused on was all the negative bits about women in policing, about how they’re all swanning about being airy-fairy and not actually getting on with it, so it kind of, it back-fired really.” [Participant O]

The news in the media caused concern within the chief officers group in terms of what was in the public domain in respect to the organisation’s reputation. Whilst the consequences were affirming Karen’s gut feeling, Lorraine felt that this matter was taken out of context. The chief officers’ view was that the reputation of POB is directly related to the public’s confidence and perception of how well POB is policing. Therefore, the news in the media had further repercussions beyond POB’s reputation.

“Because reputation is all for us, policing is so much about reputation, not for its own sake, but there’s a really strong evidence, we know, that if people have trust in their police, they have confidence in their own community, they see that, they feel good about their local police they feel good about where they live, and if they feel good about where they live, then they feel much more empowered to solve their own problems.” [Participant O]

“So our reputation is really important in order to make people feel safe. There’s a link between the perception and policing, and so we guard that reputation really, really carefully, and sometimes we have to burn it, we know that we take the hit for things that are nothing to do with us, for the greater good, that’s what happens in a democracy,
that's fine, and we take that hit with our eyes open, but this was an own goal really that we didn't need to score against ourselves.” [Participant O]

Soon after the news got into the media, Karen spoke to Mary and they discussed some options around what could be done. They also considered the option of cancelling the whole event. However, Karen felt that this would be an over-reaction to the media criticism, and as the Health and Wellbeing Day had a valid part to play she would be keen to support and encourage Advance to continue with the planned event.

“I didn't seriously consider pulling the whole event for any length of time, although that was an option we briefly considered, it was more about the fact that I didn't want, that would have seemed quite a drastic step and I didn't want to cause sort of damage and withdraw something, that would seem quite a drastic step really, so that wasn't a serious consideration, although we did look at it quickly as an option.” [Participant P]

Within hours, the comments in the media as well as within the organisation were gaining some momentum, people were misunderstanding and misinterpreting what was happening in an exaggerated way. Karen consulted the Head of Media Communications in terms of what would be the best action to take as organisation’s immediate strategy to the news and comments in the media. With his advice it was agreed that the colour-matching session should be cancelled and removed from the event programme.

"I was given the advice about how to get the media storm dying down, and I took that advice which was to agree that we would remove the colour session, and that we would write, we'd produce a press statement sort of saying that in response to public opinion, as it were, we'd thought better of it, and that, we defended ourselves, but we did say, on this occasion, in view of public comments, we've decided to withdraw that particular session.” [Participant P]

Karen and the Head of Media Communications collaboratively deployed organisation's external and internal communication strategies. They prepared a press statement to go out externally within the next 24 hours in order to respond to bad publicity in the national press, they also prepared an internal advice document for Mary to communicate what was happening to Advance’s members.
"I think we then had to spend a lot of time sorting it out, mopping it up, doing that communication, doing the press statements, we just had to do a lot of reparation, which we could have done without." [Participant O]

Eventually the media storm disappeared and the Health and Wellbeing Day took place successfully without the colour-matching session which caused much furore in the days leading to the event.

Although this incident had a negative effect on the reputation of the organisation, no formal systems or procedures have been developed for future reference as a means of taking preventative measures. The integration of the learning through this experience has been limited to verbal instructions and agreement that it was important for the support groups to consult and seek the approval of the HR team to make sure that the organisational values are represented in the right way.

"Well, procedures might be overstating it, but I have made it very clear to the Head of Advance that I would wish her to work with HR and to give us advance sight of drafts of conferences and proposed content of conferences before they go out. And I've also asked my Head of PPP to make sure there's more proactive communication about that, so my expectation is that there wouldn't be a repeat of that, and that there would be an opportunity to review the content of future conferences before an ill considered and ill worded email goes out across the Force." [Participant P]

Reflecting on this incident, Lorraine's view is that by arguing against Karen's gut feeling and influencing everyone to go ahead with the colour-matching session she acted too quickly and did not make the right decision. She explained that in reality, they could have made a more informed decision by testing out with the local media and the Police Federation to check what their view would be on this particular session. She suggested that more investigation was required in order to make an informed decision.

"Well we can have, we have close enough links through our own media team to have an off the record conversation, we could have done that to see, and if this was out there what would you think kind of thing, we could have done that, and we didn't, so I suppose we didn't make as informed a view as we could have done." [Participant O]
"... we’d have tested the water in a proper way, rather than just the few of us round the table, quickly, we could do it quickly, doesn’t have to take forever, just test that water, and use other stakeholders’ views in terms of making a decision. It would have been a better informed decision.” [Participant O]

On the other hand, Karen feels affirmed in her gut feeling in this occasion. She stated that she should have been more persistent in her view in the discussions with the chief officers.

“I mean it was a lesson, it was a lesson for me. And Karen and I have talked about it, her view is that she should have been more forceful with her view, because they were convinced by me, and actually, she said, I still felt it was wrong, and to come forward and say so really.” [Participant O]

The learning in this incident is that in the future POB should take more time in considering how these things might be put across in publicity, and when they do have time, to use that time in order to run through the information themselves and also to check with the media. Additionally, as a future reference, the learning is that HR should be involved in the organisation of such events from early on and play a more active part alongside these groups in order to make sure they don’t repeat the same mistake.

“I think the learning really is about making sure we get in early, that we work alongside these diverse support groups... so we prevent shooting out, because it could have been so easily avoided, without really, necessarily, changing anything very much.” [Participant P]

“I think the greater learning is just to take a bit of, when you’ve got time, as we did, we had a couple of days, to take that time.” [Participant O]

In summary, in this case an email sent Force-wide announcing the programme for the Health and Wellbeing Day initiated the decision process. This email led on to the intuting (a) process. For Karen, the colour-matching session outlined in this programme didn’t sound right, and she had a strong gut feeling that this was going to create bad publicity for the organisation. In the interpreting (b) process, she expressed her feelings at the chief officers’ meeting and explained that this session was not appropriate for work. Contrary to Karen’s judgement, Lorraine’s intuting
(c) led her to argue that the chief officers ought to support this session *interpreting* (d) her judgement that it was important in terms of empowering women to feel confident in a male dominant police world. In the *integrating* (e) process, Lorraine influenced everyone and it was agreed for this session to take place at the event. However, the news about POB women police officers ‘doing their colours’ quickly spread into the media. Through consultation with the Head of Communications the colour-matching session had been cancelled as a response to the damaging news in the media. This incident had negative impact on the reputation of the organisation, however the chief officers had not institutionalised formal procedures as a result of it. The support groups have been advised to consult with the HR Office in advance of doing anything in the name of the organisation.

This decision making process does not follow the 5I framework since the institutionalising process did not take place. With the two conflicting intuitions evident in this case, the model of organisational learning process emerges as presented in Figure 9.2.

This case was an ‘intuitive miss’ in that although Karen’s gut feelings were right she had been persuaded by Lorraine’s argument that as the chief officers, they should be supporting the colour-matching session. It could be argued that if Karen had been more persistent in her view and cancelled this session in a timely manner, the negative consequences could have been avoided.

**Figure 9.2 Intuitive Miss Case 2 Organisational Learning Process**

![Intuitive Miss Case 2 Organisational Learning Process Diagram](image-url)
9.3 Case 3: Staff Relocation at POC

POC in general was considered to be a poor performer, nationally and regionally, and the senior officers were told by the chief officers at the Headquarters that they had to make 20% improvements within the next 18 months. This created a pressure environment from the top to the bottom of the organisation, resulting in a lot of stress in terms of sickness and time off due to the pressure being applied across all ranks within the organisation.

"The division’s under a lot of pressure, we need to, it’s expected that we deliver results in a time line, and could we actually perceive that we can actually deliver it with what we’ve got at the minute.”

[Participant W]

As an initiating factor, in November 2009, the SMT at POC became aware of several issues in two of their police stations. These areas were ‘hot spots’ for crime and anti-social behaviour, and there was a perceived lack of the local police getting hold of and resolving the problems which were causing performance inefficiencies internally, and affecting the reputation of the organisation externally.

For instance in one of the areas, on several occasions the local police did not attend the public meetings which led to the local Councillor making damaging comments about the police and their lack of competence in doing community engagement. This in turn was affecting the public view, whereby in a national survey about the confidence of residents in the police of this particular area, the local police scored extremely low and were virtually at the bottom of the ‘league’ in the whole country. This situation reflected the poor management by the Sergeant who was in charge of the police team in that particular area.

"When there’s a Councillor who’s kind of standing up saying, “it’s absolutely disgraceful, the police in this area are rubbish, because they can’t even turn up to a public meeting”, that does tremendous harm to the views of the public of the police in that area.” [Participant W]
In the second area, the problem was flagged up when the Sergeant based there had an assessment on her ability to manage crime enquiries and the result came out very negatively.

“We were doing an accreditation process for each of our Sergeants, which involves taking them through their crime management system, and reviewing how they are managing each of their officer’s crimes, and when this process was on with this particular Sergeant, very quickly became clear that there was very little management at all, and jobs were going on for months without any intervention, they were sitting there, and not being looked at and so on... So there was an issue that was around welfare as well as actually needing somebody who can put up with things there.” [Participant S]

It became obvious to Chief Inspector Mike who was the second line manager of the two Sergeants concerned, that there needed to be a better management in place in these areas. The fact that the organisation was under a lot of pressure to deliver results in a short time meant that they didn’t have the time to actually address the problems with these Sergeants individually in order to resolve their issues – instead a quick decision was needed.

“Have we got the time to actually sit down and actually address each individual who’s working there, and actually spend time to actually make it work, or do we need something a bit more quick time taking place, and that’s where it’s come up.” [Participant W]

Mike had recently been promoted to his role as Chief Inspector, and previously as Inspector he had not had to deal with staffing issues. In the initial intuiting (a) process, his gut feeling was telling him that he needed to do something about this problem, however since he did not have much experience around such matters he was not quite sure about what to do.

“It’s been quite new to me, because I got promoted in June to this role, so although I’ve dealt with staffing issues, I’ve not had to deal with anything quite like this before, because normally in my previous role as an Inspector I just get the kind of, the results of management’s decisions about who is going where, etcetera.” [Participant W]

He started the interpreting (b) process by bringing this issue up in one of the general senior management meetings, drawing the attention to these Sergeants’ poor management skills. Each of the senior officers knew a little about what was
happening in those areas, and when they started to talk about it together, through dialogue, they started getting a fuller picture of the situation.

The collective *intuiting* (c) process began within a few minutes of discussing the problem. The senior officers' immediate reaction was that they needed to change something quickly in those areas. The collective intuitive judgement around the room was to move these particular Sergeants elsewhere where they could be provided with more support in terms of their development, whilst replacing them by other Sergeants who were known to be more capable of making a difference in those areas.

“In the senior management team, so Gavin, Neil, Roger and myself, we sat down, and so we kind of felt there was a need, from our perspective, to be seen to be doing something to support, but also to address some of the performance issues in terms of how we’re being perceived by the public, by not attending meetings, how we are kind of perceived both internally and externally by the level of crime and our apparent not getting a grip of it, and we all felt, I think, that the weak link that we needed to work on was the Sergeant, two of the Sergeants.” [Participant W]

“We had a view as a senior management team that we needed to change the management structure at two of our police stations, because we felt that the Sergeants weren’t delivering what they should have been delivering, and that we felt that there were other strong Sergeants on the Division who could step into that role and turn it round and make it a lot better.” [Participant W]

“Our gut feeling was we needed to change something... we all kind of sat round and said, yeah, that’s the right thing to do.” [Participant W]

As the discussions continued, in the *interpreting* (d) process, the senior officers talked about the individual circumstances of these Sergeants and gave justification of what they thought would be the best action to take in order to deal with the situation effectively.

“With regards to the [POC North], the officer there had suffered bereavement in his family, and it had clearly had an impact, it can take individuals long periods of time to get over that kind of thing, and with it being such an intense area we felt that somebody that had proven ability to be decisive, positive, innovative, and was a strong...”
character as well is what was needed, and that maybe the guy that was there just needed a bit of a break really.” [Participant W]

“Well two things really, the one on [POC South] sat on a limb, the person that was performing the role she's very quiet as an individual, and is not very confident at speaking publicly, and the PCs that work there are quite experienced, and they need strong management, otherwise they will take advantage of that Supervisor. And we felt that the Sergeant who was there was too inexperienced, and lacked confidence to be able to confront performance in relation to the Police Constables that needed firm management, and lacked the confidence to actually manage public meetings. We didn’t have the resilience to be able to offer enough support, to make sure that somebody was there to kind of pull her up, just there to support and actually ensure that those meetings run smoothly.” [Participant W]

The senior officers considered several other Sergeants who would be suitable for the change over, and also discussed about other alternatives that might be viable.

“... actually can we leave the individual in place there, and whereas probably did did consider can we leave them in place with an action plan, and so. But personally I did dismiss that relatively quickly, said no, we need to get her out and look for options in, so that alternative was fairly briefly examined, the options around that, then the options around who comes in there, I think we probably looked at in more detail, and looked at a number of other options, around well who is there available, who could go down there, and we did look at quite a few Sergeants, other Sergeants who could replace her. Probably didn’t do that in a structured way, like there’s this person, the pros and cons.” [Participant S]

“We can’t afford to actually put somebody, another officer in there, moneywise, because we haven’t got the budget to do that, so actually the only option we’ve really got is actually to move him somewhere else, and swap him with somebody else, so the costs actually stay the same, so that’s how we got to where we were with the decision.” [Participant W]

The senior officers involved HR Manager Amy in their discussions. Given her knowledge of particular personalities within the organisation, she was well placed to advise them in terms of who could be appointed to replace the two Sergeants.

“It was really a discussion, wasn’t it in Amy’s office, around now who could we send down there, and then I think Amy, came up with well what about...” [Participant S]
"The discussions that we had with her, but the process probably did narrow down quite quickly into 'ah-hah that sounds like a good idea!', and quite intuitively go down that line." [Participant S]

Having considered a number of different alternatives, eventually the senior officers identified a number of Sergeants who they thought were well-motivated and effective in their roles, and therefore would be ideal candidates to improve the performance in those areas. Initially, there was disagreement within the group since one of the Chief Inspectors thought swapping Sergeants was not such a good idea as it would impact on the performance of other teams.

"I think probably the first person to sort of say, "hmm, not sure about this" would have been Roger, because of the impact on the response team." [Participant S]

"... I think once it started to unravel a little bit, then there was more discussion, and then the last thing that this isn't such a good idea, and then probably there was a divergence of, I was probably still, up to quite a late stage, was still quite keen on saying, 'no I think we need to stick with this', and one by one other people were coming over, 'I think this might be too much, more trouble than it's worth'." [Participant S]

In the integrating (e) process, consensus was achieved amongst the majority of the team members and it was agreed that Chief Inspector Mike and Superintendent Neil would go and speak to all the Sergeants concerned to let them know about the management team’s decision in regard to moving them to other police stations.

"It was a plan that was in the extent of well it’s not going to be just an ask, it’s going to be a very strong ask, in fact it’s going to be, if possible, a kind of tell them that that’s what we’re going to be doing." [Participant W]

Firstly, they approached a Sergeant who initially seemed keen to do the swap, however the others were not quite enthusiastic about this plan. Mike and Neil spent several hours in conversations with the Sergeants over the following days to no avail; their attempts did not bring any satisfactory result as none of the Sergeants were willing to make this move for personal reasons.

"So within a space of the Thursday, the Friday and the Saturday, we’d seen the three key individuals so, obviously having spoken to those three people, all that we thought was actually happening was
that Nicky and Anne would be swapping, then the following week I got back, having knocked out, and then middle of last week we had a conversation, Roger had a conversation with Gary to see whether he would consider going to [South], for him to then say, no I’m not going to do it, and then on the Friday, last week, I went over to see Alan, who’s Nicky’s line manager, and then spent time with Nicky, and talked things through with her, and so by Friday afternoon last week that was it, job finished. So a lot of work for actually no result really.” [Participant W]

The root of the problem was the fact that the senior officers did not involve or consult the individuals concerned during the decision making process, they just told them the management’s final decision and this was not taken well by these Sergeants.

“So we ended up kind of leaving four people very, I suppose, distressed to an extent, when what we were trying to do was just deliver something that gut feeling was telling us it’s the right thing to do.” [Participant W]

Since the senior management’s efforts failed in trying to move the Sergeants to different stations, it became clear to the senior officers that they had to figure out a way to develop these two ‘low performing’ Sergeants as best they could in order to empower them to become effective in their current locations. It had been agreed with the Supervisors of these Sergeants to put an action plan in place with clear directions on what was required from them with strict deadlines, and it was agreed to keep monitoring them going forward.

“Actually what we’ve got to do now is we’ve got to work with the people that we’ve got, and just try and develop them as best we can.” [Participant W]

“I think Alan, the Local Commander, has given her some clear direction as to what he thinks that she should be doing, and I’ve seen some communication between the two of them that I think is a lot more directed as to where she needs to be focussing her efforts.” [Participant W]

In the aftermath of this incident, the senior officers felt that having asked several people who rejected their proposal to relocate, left them looking weak as a management team. The senior officers’ perception is that this created an impression within the organisation that it was acceptable to say “no” to senior management’s
decisions, hence not only denting their reputation, but also potentially risking the organisation’s effectiveness in terms of moving forward.

“Management reputation was, I personally think, Neil might have a different view to me, but I think it was harmed by it, certainly it harmed our standing. I think overall, probably people perceive that we are quite a positive management team, and actually are looking to take things forward, but a positive management, maybe too positive really, that’s what might be the take on it.” [Participant W]

“What it created was a kind of an impression perhaps that the management weren’t decisive in what they were doing, and that they weren’t consulting people, and letting people know what was happening. So it was probably damaging to our reputation within the division.” [Participant W]

“The implications are that if everybody knows that if managers ask you to do something and you can say no, then they’ll all say no, and it won’t happen.” [Participant W]

As a result, in order to avoid this kind of negative experience in the future, in the institutionalising (f) process, the senior management established what is called a ‘Talent Management Scheme’. This gives the opportunity to the officers who would actually want to develop and take on new challenges within the organisation to put themselves on this scheme. It would also provide the management a pool of officers who are willing to take on the challenges offered to them and not just simply refuse. Mike explains the rationale behind this scheme in detail:

“One of the things that we’ve done is we’ve just come out of the process which we’re calling ‘Talent Management’ and what that is, is that if you work in our division, and you actually see yourself as being somebody that is suitable for being promoted within the organisation and is prepared to actually be flexible and do something different, and go with what the organisation wants you to do, you actually put yourself up onto the Talent Management Scheme. So now if you look at that, and you think actually those two Sergeants over there would do a really good job over there, I can now approach those two people from the point of view, thinking okay you’re on the Talent Management Scheme, you want to get promoted to the next rank, you’ve got competency and experience, what we’d like you to do is we’d like you to go over there and do that particular role. They will not then, well it’s unlikely then that they’ll turn around and say, well yeah I don’t really want to do that, it’s going to impact on my family life, or I’d find it difficult getting to work if I was to do that, or it cost me more money in petrol, or I don’t really want that challenge.
Because they've then put themselves in the situation whereby they want to get on, and they want the organisation to give them opportunities, where they can gather evidence and experience to be able to do that." [Participant W]

Reflecting back on this experience, the senior officers recognised that the weakness in their plan was that they were mistaken in thinking that the Sergeants they saw suitable for relocation would also be willing to do so, which in reality was not the case.

"When you actually look back on it and say well actually what was the weakness in that plan, the weakness in the plan was the fact that we kind of made an assumption that people that were very productive who were very much behind the organisation in terms of taking it forward, were prepared to be flexible to work with the organisation, and actually, also that they didn't really hold a confidence as we would have hoped that they would have done." [Participant W]

"If the two people concerned were willing volunteers I think it would have actually happened in the way that we originally envisaged, and it would have probably worked okay, I mean certainly there would have been a little bit of unhappiness in the first instance with regards to the two people involved, but I think we could have worked through that, but it didn't pan out for the reasons that I said really." [Participant W]

This incident had been a learning experience particularly for Mike who had to bear the negative outcomes of his efforts. He stated that in a similar situation in the future he would approach this kind of matters differently. Mike explained that he would identify certain people who were willing to be developed in their roles and specifically look to mentor those people for upcoming opportunities. The learning for the senior officers was that in the future instead of just going with their gut feeling they would make sure that the relevant people were consulted properly in advance.

"I guess the learning is, as much as it's your gut instinct that you need to do something like that, just make sure you've crossed all your bridges, or made sure that you can actually deliver on it, before you actually commit to it, because the risk is that the management look weak." [Participant W]

"My decision making would be, unless I knew that I had somebody that would go and work wherever I asked them to, I wouldn't do it the
same way again. I'd make sure I had somebody first and I wouldn't even consider what the post was going to be, but if I thought, if I got somebody in the organisation that was working here, that I thought that was doing a cracking job and it was born out by evidence to support that, I'd say to her 'well what do you see yourself doing in the organisation', and I'd look towards mentoring people myself; in terms of actually, you know, if there's an opportunity would you be interested, and actually then come back to them separately, and say 'this might be coming up, would you be interested in it.' " [Participant W]

In summary, two Sergeants' poor management in two different policing areas initiated this decision process. Mike who initially became aware of this issue, through intuiting (a), had a gut feeling that something needed to be done in those particular areas where the public had low confidence in the police. In the interpreting (b) process, Mike brought up this matter at the SMT meeting leading to further intuiting (c) within the group. By interpreting (d) their collective intuitive judgement, it was decided to move these Sergeants to different locations where they would be provided with more support, and to replace them by other Sergeants who were known to be effective within the organisation. In the integrating (c) process, the senior officers generated options in terms of finding suitable candidates to swap places with the Sergeants in question. Having made the decision within the SMT, the senior officers approached the Sergeants to tell them about the move they planned. However, the Sergeants refused the management's decision, making the management team look weak in terms of not being able to implement their decisions. Additionally, this outcome also weakened the senior officers' ability in improving the effectiveness of the organisation by attempting to strengthen the weak links within the organisation. As a result of this experience, the establishment of the Talent Management Scheme facilitated the institutionalising (f) process. This provided the opportunity to those officers who would like to advance within the organisation to put themselves on this scheme. It also assured the senior officers that those officers would be willing to do what the senior management requested from them. This decision making process follows the 5I framework and the emerging model is shown in Figure 9.3.

This case was an 'intuitive miss' for POC senior officers as their proposal to move Sergeants to different locations has not been effective. It appeared that the
underlying problem was due to the lack of consultation and communication with the Sergeants concerned during the decision making process. It could be argued that if they made the decision in consultation with the individuals concerned then perhaps their plan would not have failed. Perhaps this negative outcome could have been avoided if they provided an opportunity for the Sergeants concerned to engage in the decision making process. Even though the Sergeants might still not be willing to make the move that the management team proposed, this problem would have been realised sooner and the senior officers would have been able to arrange different alternatives.

**Figure 9.3 Intuitive Miss Case 3 Organisational Learning Process**

![Intuitive Miss Case 3 Organisational Learning Process Diagram](image)

**9.4 Conclusion**

This chapter presented the research findings emerging from the investigation of three decision making processes at three police organisations. These cases were described by the participants as ‘intuitive misses’ as the decisions were based on intuitive judgements which led to ineffective outcomes for their respective organisations. Analysis of these cases from the perspective of the 4I organisational learning framework revealed the following findings:
• As in the case of the ‘intuitive hits’, there is an additional process of ‘initiating’ prior to the intuiting process which is evident in all three cases of ‘intuitive misses’.

• As per ‘intuitive hits’, there is evidence of intuitions coming from personal experience, and appearing as gut feeling. In Case 1, there is also mention of intuiting as pattern matching and situation awareness, requiring low conscious effort and resulting in fast response. As in Case 2 of ‘intuitive hits’, it is also observed here in Case 2 and Case 3 that intuition acted as a warning sign leading to action.

• There appears to be a process of collective intuiting evident in Case 3 whereby the officers engaged in intuiting in the group, coming up with the same judgement on how they should deal with the situation.

• It appears that there is a lack of analysing in all three cases. In Case 1, it appears that analysing process took place, however it was not a thorough investigation and the information gathered was inaccurate. In Case 2 and Case 3, there is no evidence of analysing, the decisions seem to be based solely on the intuitive judgements of the officers.

• As per ‘intuitive hits’, it is evident in all ‘intuitive misses’ that interpreting involves sense making for one’s self and dialogue with others, and explanation of intuitive judgements by way of justifying the underlying rationale.

• There appears to be various group decision making processes occurring in the integrating process. In addition to the ones observed in the ‘intuitive hits’, in ‘intuitive misses’ as a result of the failure, there appears to be an emphasis on taking accountability for the mistake and empowering the people involved. Another important factor which the officers seem to regard very highly is the reputation of the organisation. Accordingly, in all three cases the officers’ efforts appear to be focused on repairing the situation as quickly as possible in order to minimise the damage on the organisation’s reputation.
Contrary to the original 4I framework, and in support of the findings in 'intuitive hits', it is evident that individual and group learning does not always get institutionalised. In Case 1 and Case 2, the officers did not develop formalised procedures as a result of these incidents. There appears to be a belief by the senior officers that the high profile of these incidents would have an impact on everyone in the organisation leading to implicit learning whereby nobody would want to repeat the same mistake again. On the other hand, in Case 3 as a result of their failed attempts the officers institutionalised their learning by developing a system which would prevent the negative outcomes of this incident happening in the future.

In the cases of the 'intuitive misses' it is observed that the officers reflected on their respective decision making processes and noted what they would do differently in the future to avoid the negative outcomes of these incidents.

The implications of these findings are discussed in detail in Chapter 10.
Chapter 10  Discussion of Findings of Study 2

10.0 Introduction

The aim of this chapter is to discuss and synthesise the findings of Study 2, as analysed and presented in Chapter 8 ('intuitive hits') and Chapter 9 ('intuitive misses'). The findings of this study build on and extend the original 4I model (Crossan et al, 1999) which was used as the underlying framework in this research. In light of the previous research on intuition in management, decision making and organisational learning, this chapter utilises key theoretical findings from the literature to discuss the conceptual foundation of the emerging findings in this research.

The discussion is presented in three main sections. The first section evaluates the organisational learning processes and the emerging sub-processes. The second section focuses on the role of intuition in managerial decision making. The final section summarises the findings from the research and concludes the chapter.

10.1 Organisational Learning Processes

Further to providing a rich description and analysis of the case studies of decision making and organisational learning processes in Chapters 8 and 9, this section aims to evaluate the findings and compare them to past research. The following discussions are based on the key themes that emerged from the empirical data. As the objective of this research is to explore how organisations learn from their managers' intuitions, this study focused on the feed forward organisational learning processes. Accordingly, the discussion is organised in a sequential way following the learning processes as proposed in the 5I framework (i.e. initiating, intuiting, interpreting, integrating, and institutionalising). Table 10.1 summarises the sub-processes evident in the learning processes as presented in six case studies. Table 10.2 provides the definition of the sub-processes and gives an example of each from the data.
Table 10.1 Sub-Processes of 5I Organisational Learning Framework

<table>
<thead>
<tr>
<th>OL Processes</th>
<th>Intuitive Hits</th>
<th>Intuitive Misses</th>
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<tbody>
<tr>
<td></td>
<td>Case 1</td>
<td>Case 2</td>
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<tr>
<td><strong>Initiating (I₀)</strong>*</td>
<td></td>
<td></td>
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<tr>
<td>External Drivers</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Internal Drivers</td>
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<tr>
<td>Hierarchy</td>
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<tr>
<td>Uncertainty</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Complexity</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Time Pressure</td>
<td>✓</td>
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<tr>
<td><strong>Intuiting (I₁)</strong></td>
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<tr>
<td>Analysing</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Scanning</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Experience</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Gut Feel</td>
<td>✓</td>
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<tr>
<td>Professional Judgement</td>
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<tr>
<td>Certitude</td>
<td>✓</td>
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<tr>
<td>Subjective Speed</td>
<td>✓</td>
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<tr>
<td>Judgement</td>
<td>✓</td>
<td></td>
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<tr>
<td><strong>Interpreting (I₂)</strong>*</td>
<td></td>
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<tr>
<td>Dialogue</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Rationalising</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Visualising</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td><strong>Integrating (I₃)</strong>*</td>
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<tr>
<td>Generating Options</td>
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<td>✓</td>
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<td>Negotiating</td>
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<tr>
<td>Conflict</td>
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<td>Consensus</td>
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<td>Consulting</td>
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<td>Validating</td>
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<td>Involvement</td>
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<tr>
<td>Communicating</td>
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<td>Empowering</td>
<td>✓</td>
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<td>Team Developing</td>
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<tr>
<td>Influencing</td>
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<td>Reputation</td>
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<td>Values</td>
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<td>Credibility</td>
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<tr>
<td>Accountability</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Institutionalising (I₄)</strong>*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Systematising</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Adjusting</td>
<td>✓</td>
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<tr>
<td><strong>Post-Decision Processes</strong></td>
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<tr>
<td>Reflecting</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Learning</td>
<td>✓</td>
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</table>

✓ shows which sub-processes are evident in each of the case studies.
### Table 10.2 Definition of Sub-Processes and Examples

<table>
<thead>
<tr>
<th>Sub-Processes</th>
<th>Definition</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Initiating</strong></td>
<td></td>
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<tr>
<td>External Drivers</td>
<td>Triggers from outside the organisation.</td>
<td>Very much so, it was the government who brought the funding along and also the direction to say this is what you will do. [Participant T, Intuitive Hit Case 3]</td>
</tr>
<tr>
<td>Internal Drivers</td>
<td>Triggers from inside the organisation.</td>
<td>I think we all recognised the performance deficiencies and the leakage so I guess it almost became a fait d’accompli, we had to change. [Participant A, Intuitive Hit Case 1]</td>
</tr>
<tr>
<td>Hierarchy</td>
<td>Authority based on organisational position, e.g. structural power.</td>
<td>We were very much tied into, we couldn’t make the decision ourselves because there needed to be an authority and go ahead from various internal senior officers and processes. So we couldn’t go with it as quickly as we’d like to. [Participant C, Intuitive Hit Case 1]</td>
</tr>
<tr>
<td>Uncertainty</td>
<td>Situations where there is a lot of unknowns, lack of information; doubt in the external world or one’s state of knowledge.</td>
<td>So the first decisions were there without a lot of information, without a lot of guidance. It was kind of you interpret this national stuff in the way that you want to do it locally and find the best way of doing so. [Participant R, Intuitive Hit Case 3]</td>
</tr>
<tr>
<td>Complexity</td>
<td>Dynamic and changing situations; situation is complicated, and not straight forward.</td>
<td>There is all sorts of balance, all types of risks and different areas of accountability because obviously we all got different areas of accountability and you put that into it and then you add to the financial risks, and the human resource risk in terms of communication, managing that change etc, etc, it was a very complex and intense period of our time I suppose. [Participant D, Intuitive Hit Case 1]</td>
</tr>
<tr>
<td>Time Pressure</td>
<td>Time is limited and there is pressure to make a decision.</td>
<td>And so the only question marks about that become the need to make a quick decision, because something like that you can’t just hang around for a week and decide what to do. [Participant Q, Intuitive Hit Case 2]</td>
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<tr>
<td>Intuiting</td>
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<tr>
<td>Analysing</td>
<td>Information processing through series of logical, ordered steps; sustained systematic thought over a substantial period of time; use of systematic procedures to thoroughly assess all pertinent information, and ultimately make a decision based on conscious deliberation.</td>
<td>So we expected them to do their consultancy, to provide a formula that could be applied to understanding your business, what are your business rules in terms of how you allocate, you now need to, based on this demand curve, consider reallocating resource and changing your structures, that’s what we expected. [Participant C, Intuitive Hit Case 1]</td>
</tr>
<tr>
<td>Scanning</td>
<td>Search for knowledge from internal and/or external sources in order to monitor the environment and gather information useful in the decision process.</td>
<td>I went with my colleague prior to the warrant, had a look at the front, I wanted to see is there a washing machine there, I couldn’t see through, it was a completely solid UPVC door. I had a look at the back wall, looked into the kitchen, to me it looked a state. There was a pram there, I was aware that the subject of the warrant had a young child. The kitchen looked a mess to me. I thought I’m happy with this. [Participant K, Intuitive Miss Case 1]</td>
</tr>
<tr>
<td>Experience</td>
<td>Knowledge obtained through prior learning.</td>
<td>I think there was intuition for the whole, it comes from something in the back of your mind, your experiences, and we’ve all got a certain amount of experience to stand up here. [Participant E, Intuitive Hit Case 1]</td>
</tr>
<tr>
<td>Gut Feel</td>
<td>Judgements guided by positive or negative feelings (affect); anticipation of a good or bad outcome giving rise to a somatic (physical) response.</td>
<td>Six months ago, a year ago, I wouldn’t have felt the same way, so my intuition would have been different at that point in time, whereas today it doesn’t feel right. [Participant N, Intuitive Hit Case 2]</td>
</tr>
<tr>
<td>Professional Judgement</td>
<td>Intuitive judgement based on one’s significant level of knowledge and experience in a particular domain.</td>
<td>I think from the touchlines one of the really, really interesting things was Robert uniform police, Andrew reactive investigation and intelligence, Peter volume crime management and custody arriving at a model and a distribution of resources within that model in the absence of any real science that says you need to put so many people in there and so many people there. And I guess that’s where professional judgement, intuition and no secret the tensions of the merge in trying to come up with a model that is workable. [Participant A, Intuitive Hit Case 1]</td>
</tr>
<tr>
<td>Certitude</td>
<td>Perception that one’s intuitions are correct despite the lack of rational analysis; confidence in one’s judgements.</td>
<td>Because in this decision I never had any self doubt, is that me or shall we just go for it and that’s what it is. [Participant V, Intuitive Hit Case 3]</td>
</tr>
<tr>
<td>Subjective</td>
<td>Personal experience of intuitions giving rise to subjective perceptions.</td>
<td>Because part of the culture again is that we provide advice documents a lot and then people because of this framework turn around and say no I don’t think that’s right I’ll go and do something else. It can be counter productive within an organisation that if everybody is using their gut reaction, everybody’s gut can tell them to do something different and you’ll end up with non-specific delivery. [Participant T, Intuitive Hit Case 3]</td>
</tr>
<tr>
<td>Speed</td>
<td>Fast intuiting; immediate awareness of the situation.</td>
<td>It’s a gut feeling, the second, the second we got into the house, my gut feeling was that, I saw the bloke that was there, my gut feeling the second we got into the house is “oh my God, it’s either the wrong address or the people aren’t here anymore”, the second we got in. [Participant J, Intuitive Miss Case 1]</td>
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<table>
<thead>
<tr>
<th>Interpreting</th>
<th></th>
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<tr>
<td><strong>Dialogue</strong></td>
<td>Conversational process with others to interpret intuitive judgments through development of language.</td>
<td>Tim and I within a matter of weeks and months of me arriving, we were talking and saying it’s not fit for purpose, it didn’t feel what we needed it to do. [Participant B, Intuitive Hit Case 1]</td>
</tr>
<tr>
<td><strong>Rationalising</strong></td>
<td>Providing explanations, reasoning and justification to one’s self and to others to interpret judgements.</td>
<td>Your intuition may be the starting point but then you are going to have to rationalise it, you are going to have to research it, you are going to have to be able to evidence it, or if you’re not going to be able to take other people with you you’re not actually going to be able to get support for it. [Participant U, Intuitive Hit Case 3]</td>
</tr>
<tr>
<td><strong>Visualising</strong></td>
<td>Visual interpretation of intuitive judgements, e.g. images.</td>
<td>I’ve drawn it on Roger’s board, I think it was a case of I read some of the research documents that were out there at the time, I think that’s what happened. A fair bit of much of what we do and then based on those research documents kind of try to make some sense of what it was out of that and then kind of drew that on Roger’s board. [Participant R, Intuitive Hit Case 3]</td>
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<tr>
<td><strong>Integrating</strong></td>
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<tr>
<td><strong>Generating Options</strong></td>
<td>Creating and evaluating a range of alternatives through a group brainstorming process.</td>
<td>I mean we considered, one, that they pay, the attendees pay themselves, two, that we actually go to a venue in [...] and just have a drink together, but then when we talked around, do you do that, could we do that in terms of the mix of people who’d be coming together. And another one which was even dodgier, I think, was to pass it back to Group 4 Security, which is a private company, and ask them to pay. [Participant N, Intuitive Hit Case 2]</td>
</tr>
<tr>
<td><strong>Negotiating</strong></td>
<td>Process of discussion to reach a mutually satisfactory agreement.</td>
<td>We did a lot of horse-trading as it were between each other, I’ll have so-and-so, and need somebody with this skill set, where can I get them? [Participant E, Intuitive Hit Case 1]</td>
</tr>
<tr>
<td>Conflict</td>
<td>Disagreement, discord, contention, debate.</td>
<td>The Chief Inspector, he was aware of the discussions, I think once it started to unravel a little bit. Then there was more discussion, and then the last thing that this isn’t such a good idea, and then probably there was a divergence of, I was probably still, up to quite a late stage, was still quite keen on saying, “no I think we need to stick with this”, and one by one other people were coming over, “I think this might be too much, more trouble than it’s worth”. [Participant S, Intuitive Miss Case 3]</td>
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<tr>
<td>Consensus</td>
<td>Reaching agreement, or resolving conflict, to take a particular decision/action.</td>
<td>We took a view, again round this table, in very quick time, that actually, even though we could justify every penny, we didn’t want the publicity, and didn’t want to be seen to be criticised last week, as it was a few months ago, and then almost ignore that criticism and still blandly, blithely go on ahead and have our own little conference spending, what is perceived to be taxpayers money on having a nice time. [Participant L, Intuitive Hit Case 2]</td>
</tr>
<tr>
<td>Consulting</td>
<td>Obtaining advice from people internal or external to the organisation who are trusted to have expert knowledge in a particular field.</td>
<td>We managed to get somebody from County Council for neighbourhood management to work with us in the team, so we were understanding things differently. We went to kind of local politicians, presented it to communities, through similar points of contact, so there was a fair bit of consultation, probably could have been an awful lot more. [Participant R, Intuitive Hit Case 3]</td>
</tr>
<tr>
<td>Validating</td>
<td>Checking with others to confirm one’s own intuitive judgements.</td>
<td>So I didn’t need a lot of persuading and that, because it was almost presented to me as we’re not very sure about this, our instinct is not to do it, and almost just really kind of asking me for that kind of further judgement confirmation, which in some ways was quite easy. [Participant Q, Intuitive Hit Case 2]</td>
</tr>
<tr>
<td>Involvement</td>
<td>Participation of the decision team or organisational members in the decision making process.</td>
<td>You’ll always get that cohort of people who want to be involved and want to drive in assisting that change, at the other end of the spectrum you’ll get those people who will criticise and complain and moan no matter what you actually do but they’ll never actually contribute to the process. [Participant B, Intuitive Hit Case 1]</td>
</tr>
<tr>
<td>Communicating</td>
<td>Exchange of thoughts and ideas, sharing of information within the organisation.</td>
<td>The key bit in terms of intuitive leadership is if it’s not connected with good communication then it can fail. Because you can’t make the connection where you’ve gone with your intuition into actually why you need to do it... that’s what we ended up doing, trying to talk to people about why. [Participant R, Intuitive Hit Case 3]</td>
</tr>
<tr>
<td>Empowering</td>
<td>Granting one the authority or confidence to take a decision/action.</td>
<td>We empower and entrust our people to do that, which I think is the right thing to do, and when you’ve got a highly motivated individual, such as Steve, who’s got a good track record, you encourage your people to be successful, so there is this delegation and it really is empowerment, trusting our people to go and do a good job. [Participant A, Intuitive Miss Case 1]</td>
</tr>
<tr>
<td>Team Developing</td>
<td>Building and strengthening the decision making group as a result of collaboration.</td>
<td>From the rest of SMT, it’s built us as a stronger team because we have worked through a real challenge together. [Participant H, Intuitive Hit Case 1]</td>
</tr>
<tr>
<td>Influencing</td>
<td>Convincing others to determine decisions in order to take a particular action.</td>
<td>I managed to convince my colleagues to go with it, whereas actually their feeling is the right one. [Participant O, Intuitive Miss Case 2]</td>
</tr>
<tr>
<td>Reputation</td>
<td>Organisational or individual status in the public domain.</td>
<td>What it created was a kind of an impression perhaps that the management weren’t decisive in what they were doing, and that they weren’t consulting people, and letting people know what was happening. So it was probably damaging to our reputation within the division. [Participant W, Intuitive Miss Case 3]</td>
</tr>
<tr>
<td>Values</td>
<td>Set of individual or organisational principles which reflect a sense of right and wrong concerning appropriateness of a particular course of action.</td>
<td>I think consistency is really important as well, so bringing it back to the values of the organisation, and the way we do business, so that we can always hang things on values, somewhere, whatever it is you can unpick it down to that, and do the right thing for the right reasons. [Participant O, Intuitive Hit Case 2]</td>
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<tr>
<td>Credibility</td>
<td>Perception of one’s ability and reliability informed by others.</td>
<td>One issue is a leap of faith, and that if you have a leap of faith, other people have got to have faith in you that you are making the right leap. And so you can have all the intuitive decisions you like, if you are seen as an idiot, people will not... [Participant V, Intuitive Hit Case 3]</td>
</tr>
<tr>
<td>Accountability</td>
<td>Being responsible or liable for decisions/actions taken which bind people to consequences.</td>
<td>At the end of the day we got it wrong, put our ‘hands up’ and accept we got it wrong. [Participant F, Intuitive Miss Case 1]</td>
</tr>
<tr>
<td><strong>Institutionalising</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Systematising</td>
<td>Embedding of learning into the organisation’s system; establishing formal mechanisms to ensure that certain actions occur.</td>
<td>We have engagement strategies, we have neighbourhood policing plans, we have web sites, we have computer packages, to look at problem solving, we have regular processes around the inter communities, types of poster that can go out, everything is regularised now. [Participant R, Intuitive Hit Case 3]</td>
</tr>
<tr>
<td>Adjusting</td>
<td>Adaptation of established procedures as a result of assimilated new learning, to fit the context of the organisation.</td>
<td>New demands come in, new analysis, new issues arise, so for instance, in Peter’s world we’ve got to re-adjust and lose some capacity which we had in some proactive teams to support the custody, and just supply in a 24 hour basis support to the rest of the BCU wasn’t possible under the regime, so there has been some refinement, around that. [Participant D, Intuitive Hit Case 1]</td>
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</table>
10.1.1 Initiating Process

As it has become evident in the analysis of all six cases, a significant finding in Study 2 of this research is that, there appears to be an additional process prior to the intuiting process which the researcher called the ‘initiating’ process ($I_0$). This process forms the decision context which acts as a trigger leading to the intuiting process.

The 4I framework has been used previously to explore organisational learning processes within different contexts (Zietsma et al, 2002; Crossan and Berdrow, 2003; Lawrence et al, 2005; Jones and Macpherson, 2006; Berson et al, 2006). To the best of the researcher’s knowledge, none of these studies has proposed an additional process leading to intuiting. Based on this novel finding, the original 4I framework is extended to incorporate this additional process to form a 5I framework.

Given that decision making is context specific, Salas et al (2010) asserted that the effectiveness of intuitive decision making will be determined by the decision environment and the nature of the decision task. The authors also suggested that the characteristics of the decision maker (which they identified as expertise and individual differences in information processing styles) will also be influential in this regard. It should be noted that the analysis of the decision makers’ information processing styles was beyond the scope of Study 2 as the unit of analysis was the decision processes, not the decision makers (individual differences in information processing styles have been examined in Study 1 of this research). However, the expertise characteristic of the decision makers were taken as granted given the participants’ extensive years of experience in the policing domain.

External and Internal Drivers

The data revealed that the initiating process involves external and/or internal circumstances which set the context for the critical incident, and by coming to the attention of the decision maker, act as a trigger and drive the decision making process. Louis and Sutton (1991) identified three types of triggers which provoke the
switching of cognitive gears from automatic to active thinking, that cause the actors to become consciously engaged in the situation. The first trigger event is when one experiences a situation as unusual, novel, unfamiliar or previously unknown (e.g. in ‘intuitive hits’ Case 2, the email invitation for a dinner celebration was an unusual event for the Assistant Chief Constable which triggered him to act on this information. Similarly in ‘intuitive misses’ Case 2, the colour-matching session at the Health and Wellbeing Day seemed unusual for the HR Director). The second trigger event is when there is an unexpected failure or a disruption (e.g. in ‘intuitive misses’ Case 1, the failure of the drugs search by the operations team initiated decision making process by the SMT. Similarly in ‘intuitive misses’ Case 3, two Sergeants’ poor assessment of crime management came to the attention of the Chief Inspector, triggering him to respond to the situation). The third trigger event refers to deliberate initiatives in response to an internal or external request for an increased level of conscious attention (e.g. in ‘intuitive hits’ Case 3, the senior officers were given a Government directive to establish neighbourhood policing across the organisation. Similarly in ‘intuitive hits’ Case 1, the external demand for an effective police service and the poor organisational performance required POA to restructure their resource allocation).

**Authority**

Due to the hierarchical structure of police organisations in general, it is not surprising to find a strong influence of the authority figures on the decision process. For example in the case of POA, despite the internal and external demand, the chief officers were reluctant to allow the SMT to change the structure of the organisation (i.e. ‘intuitive hits’ Case 1). Finkelstein (1992) referred to structural power which is based on formal organisational structure and hierarchical authority. Accordingly, the greater the manager’s structural power the greater his/her control over colleagues’ actions (Finkelstein, 1992). In the case of POA, whilst the SMT had the authority for the management of POA’s BCU, they were accountable to the chief officers (who are more senior in rank) in matters as significant as changing the organisational structure, therefore their approval was crucial. However, in this case it appears that the authority exercised by the chief officers has been a detrimental factor in the
initiating process which slowed down the pace of decision making (Eisenhardt and Bourgeois, 1988).

**Uncertainty, Complexity, and Time Pressure**

In the initiating process, it is observed that the decision environment characterised by uncertainty, complexity, and time pressure influences a decision maker's propensity to use intuition as a basis for a decision. These findings support previous research suggesting that many managers use their gut feelings to assist their problem solving and decision making, especially under complex and uncertain conditions (Agor, 1986; Khatri and Ng, 2000; Shapiro and Spence, 1997; Burke and Miller, 1999; Hayashi, 2001; Isenberg, 1984; Parikh et al, 1994), in high-stakes tasks and under time pressure (Klein, 1997a; Lipshitz et al, 2001). In several cases uncertainty, consistent with Klein's (1998) description, presented itself in the form of missing information, lack of knowledge and/or ambiguous information. Klein (1998) stated that since it is impossible to achieve hundred percent certainty, decision makers must be able to proceed without having the full understanding of the situation. There is evidence in the interview data that despite uncertainty the decision makers acted on the decision. This finding accentuates the importance of timing. Several participants claimed that in certain circumstances when time is limited to weigh up the pros and cons of the situation, it is more important to make any decision than no decision at all. Accordingly, the need for a quick decision in the face of uncertainties coupled with the complex nature of the situation combine to create a decision environment which triggers intuitive approach to decision making.

**10.1.2 Intuiting Process**

Having been triggered by the external and/or internal factors in the initiating process, the learning begins with the individuals in the intuiting process. Crossan et al (1999) provided insights into the role of the subconscious in this process; emerging evidence from the case studies suggests the presence of more deliberate and conscious processes taking place alongside intuiting. Additionally, in line with previous research (e.g. Hensman and Sadler-Smith, 2011), the data reveals certain
characteristics of intuition which are discussed below in conceptual terms providing examples from the interviews.

**Expertise and Affect**

In the intuiting process all of the participants referred to intuition as coming from their past experiences, and appearing as a gut feeling in the form of judgement that felt right or wrong. Furthermore, some participants used the term 'professional judgement' to refer to intuitive judgement (see Prietula and Simon, 1989; Hayashi, 2001; Patton, 2003). It has been observed by the researcher that the terms intuition and gut feeling were used by the study participants interchangeably without the distinction of the expertise and feeling characteristics which are the most commonly noted in the literature on intuition. The expertise and affect divergence was partially addressed by Dutta and Crossan (2005) who distinguished between expert and entrepreneurial intuition. The former is consistent with Simon’s (1987: 63) assertion of intuition as “analyses frozen into habit” whereas the latter is consistent with Epstein’s (1998) notion of experiential processing which involves affect.

Sadler-Smith and Shefy (2004) suggested that intuition relies on both expertise (through explicit and implicit learning processes, manifested as subconscious decision heuristics) and feelings (manifested as affect associated with particular stimulus). The authors called these two notions as ‘intuition-as-expertise’ and ‘intuition-as-feeling’ respectively. Similarly, Miller and Ireland (2005) proposed that intuition can be conceptualised in two distinct ways: as ‘holistic hunch’ and as ‘automated expertise’.

Simon (1987) also acknowledged this distinction by asserting that the intuition of the emotion-driven manager is very different from the intuition of the expert; the latter’s behaviour is the product of learning and experience, and is largely adaptive; whereas the former’s behaviour is a response to more primitive urges and is more

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3 Whilst it is not uncommon to find in the literature that the terms ‘emotion’ and ‘affect’ are used interchangeably (Sinclair and Ashkanasy, 2005) it is important to note that intuitions are affectively-charged judgements (Dane and Pratt, 2007), and this is different from emotions.
often than not inappropriate. On the contrary, Damasio (1994) claimed that somatic markers play a crucial role in helping the decision maker filter various possibilities quickly, even though the conscious mind might not be aware of it.

In the interview data, there is evidence of intuitions as expertise and as gut feeling. For example in ‘intuitive hits’ Case 1 and Case 3, the senior officers’ intuitions were based on their expertise which the officers attributed to their prior learning and professional seniority. On the other hand, in ‘intuitive hits’ Case 2 and ‘intuitive misses’ Case 2, the senior officers’ intuitions appeared in the form of a strong affectively charged gut feeling which the officers described as stress or anxiety. In the latter two cases it is also observed that the gut feeling acted as a warning sign requiring the decision maker to respond to the situation. This finding supports research in neuroscience that the intuitive processes, manifesting themselves as automatic somatic alarm bells, provide feelings-based signals to the decision maker for or against a course of action (LeDoux, 1996; Damasio, 1994).

Certitude

Whilst the participants were not able to fully explain what happens during the process of intuiting, they referred to several characteristics of intuition. For example, senior officers indicated the feeling of certitude in their intuitions (Shirley and Langan-Fox, 1996) commonly expressed by statements such as “it felt right” or “it was the right thing to do” constituting belief that their intuitions were correct (Shapiro and Spence, 1997) despite the inadequate information around the decision. Dane and Pratt (2007: 39) stated that the feeling of certitude which accompanies intuition may be due to its “affective and associative properties”.

Having high levels of confidence in their intuitions meant that sometimes the senior officers were taking a risk by following their gut feeling (Slovic et al, 2002). For example in ‘intuitive hits’ Case 3, although the senior officers were provided with an advice document on how to establish neighbourhood policing, they ignored this advice and trusted their intuitive judgement to create the organisation’s public engagement model. Whilst the outcome was positive, this was a gamble on their part.
and carried a risk as they had no previous experience of what they were expected to deliver. Clearly, in the other two cases whereby the officers felt certain of their intuitions, they were misguided by their intuitions leading them to 'intuitive misses'.

**Speed**

The participants also made reference to the speed of intuitive processing, the aspect of intuition which drew the most attention in the field of managerial decision making (Agor, 1986; Eisenhardt, 1989, 1990; Burke and Miller, 1999; Khatri and Ng, 2000; Klein, 2003). This was particularly evident in 'intuitive hits' Case 2 and 'intuitive misses' Case 1 when in both cases the officers had an affectively charged gut feeling about the situation which arose rapidly. Evidence suggests that nonconscious recognition occurs almost immediately upon engagement with relevant stimuli (Hensman and Sadler-Smith, 2011).

**Subjective**

Additionally, the senior officers emphasised the subjective nature of intuition by stating that the intuitive judgements they made were subjective on the basis of their accumulated personal experiences and how they felt about the situation. Since intuitions are derived from tacit and explicit ways of learning (Dane and Pratt, 2007; Hogarth, 2001), giving rise to differences in subjective perceptions of people, the senior officers acknowledged that the quality and effectiveness of the decisions depended on the decision makers involved in the decision making process.

**Nonconscious Processing**

Miller and Ireland (2005) stated that intuitive decision makers cannot explain why they feel the way they do, or why they make the choices they make. This resonates with Epstein's (2008: 29) claim that intuition involves "knowing without knowing how one knows". Accordingly, whilst there is evidence of attributes of intuition (such as its speed and subjectivity, and being based in experience and attended by affect), a majority of the participants were not able to tell exactly what happens
whilst they are intuiting. This supports the previous conceptualisation of intuition that it is a nonconscious process (Epstein, 1994; Hogarth, 2001). In ‘intuitive hits’ Case 1, one of the Chief Inspectors attempted to describe his personal experience of intuiting:

“I tend to go on gut feelings quite a lot... there’s a lot of numbers and stuff going through my head, it’s like you can’t work it all out, and you wake up in the middle of the night, and there it is, because your brain’s processed it all. So yeah, there is a lot of gut feeling...”

[Participant E]

His explanation suggests that the process of intuiting occurs beyond conscious awareness, he is only aware of the outcome (i.e. intuitive judgement) as a result of intuiting (Dane and Pratt, 2007).

**Collective Intuition**

Whilst intuiting is an individual level process (i.e. the phenomenon is a personal and highly subjective experience), it has emerged from the analysis of the data that the officers also engaged in a collective intuiting process. Several authors stated that collective intuitions shared among senior managers are of great value to decision making, and may contribute to faster and more accurate reactions (Eisenhardt, 1989, 1999; Eisenhardt and Martin, 2000) and facilitate collective learning processes (Sadler-Smith, 2008). Jett and Brown (2002) found that the development of collective intuition involves drawing advice and experience from other people rather than from sources of explicit information, and making the tacit knowledge of individuals more explicit to the group. This helps the decision makers develop shared domain-related experiences that lead to collective intuition, problem solving, and organisational learning.

The evidence of collective intuitions in this study suggests that, the officers involved in the decision making had the same intuitive judgement as their colleagues on the situation they were dealing with. For example in ‘intuitive hits’ Case 2, the Assistant Chief Constable, the Chief Constable and the Finance Director all had the same intuitive judgement that the proposed dinner event ought to be cancelled. Also in
“intuitive misses” Case 3, the SMT collectively addressed the problem regarding the poor performing Sergeants, and had a collective intuition about how it should be resolved.

In an empirical study of intuitive team decision making, Kline (2005) found that the expert team developed strong shared mental models that caused them to intuitively understand an event in relation to prior events they have experienced together. Collectively understanding the event allows each team member to independently make an intuitive judgement that is the same as his/her teammates. In another study, Seifert and Hadida (2009) provided empirical evidence of the value of collective intuition; their results showed that reliance on more than one individual judgement may increase the predictive power of intuition.

**Scanning**

In the intuiting process, it appears that some decision makers engage in scanning to search for knowledge from external or internal sources in order to monitor the environment and provide information to managers that would be useful in the decision process (Huber, 1991; Weick, 2001; Almeida, Phene and Grant, 2005).

Accordingly, for example in “intuitive hits” Case 3, the senior officers of POC run reassurance pilots in order to find out how they could establish engagement with the public. The knowledge gained from these pilots fed into the senior officers’ intuiting process helping them to develop the organisation’s model for public engagement. Similarly in “intuitive hits” Case 1, the senior officers looked at the resource allocation models of other police organisations similarly positioned to POA to realise that they needed to achieve lower numbers in neighbourhood policing teams.

Prietula and Simon (1989) suggested that by scanning the environment, experts absorb and evaluate large quantities of information quickly, grasping the meaning of certain patterns of operations or activity. This explanation fits well with what happened in “intuitive misses” Case 1. The police officer went to the address in question several times to check whether there is any activity that would corroborate
the intelligence, his intuitive judgement was that it looked like a drug dealer’s house. Consistent with the literature, this finding suggests that the officer’s intuition relied on the recognition of patterns on the basis of his previous experience of what a drug dealer’s house looked like (Klein, 1998; Crossan et al, 1999).

Kleysen and Dyck’s (2001) addition of ‘attending’ to the intuiting process represents scanning and searching that form the linkage between the environment and the organisation. The authors distinguished between the ‘passive’ sense of attending which is viewed as receiving information that triggers the evaluation and search of ideas, and the ‘active’ sense of attending which relates to learning that is derived from deliberate scanning and analytical process which may lead into or out of the intuiting process. In this respect, what the researcher called ‘scanning’ is akin to Kleysen and Dyck’s notion of active attending whereby the search for information is deliberate.

**Analysing**

As Simon (1987) asserted intuition is not a process that operates independently of analysis; rather the two processes are essential complementary components of information processing (Epstein et al, 1996) and effective decision making (Damasio, 1994). In this respect – drawing on the terminology used in the dual-process theories which form the conceptual foundation of this research – the findings from the data suggest that there appears to be a process of analysing, to the extent of varying degrees in different circumstances, which take place either prior to, after, or in parallel with the intuiting process. In ‘intuitive hits’ Case 1, analysing occurred prior to intuiting whereby the failure of attempts to develop a resourcing formula solely based on analysis led to the intuiting process by the senior officers; in Case 2, analysing took place after the officer had a gut feeling about the situation by way of trying to gather more information to back up his intuitive judgement; in Case 3, the senior officers employed their intuitive judgements alongside using analytical data. On the other hand, it appears that there was a lack of analysing in all three cases of ‘intuitive misses’. Only in Case 1 it is observed that some analysing took place, however as it became apparent from the comments of the decision makers that this
was less than what they would normally do under the same circumstances. Additionally, the information gathered was inaccurate which was not realised due to the lack of analysis. It could be argued that these factors combined biased the officer's perception, who as far as he was concerned was attending a routine job, to make an incorrect intuitive judgement, hence leading to the failure of the operation. In Case 2 and Case 3 there is no evidence of analysing, the decisions seem to be based solely on the intuitive judgements of the officers.

It is evident in the findings of this study that the participants actively used external and explicit sources of knowledge (some of which might result from the scanning of the environment) to analyse information. Kleysen and Dyck (2001: 5) stated that active attending “is definitely a more conscious and analytical process” whereby the authors refer to the active nature of scanning and searching. It is imperative to clarify that they do not present attending as a process of analysing. To distinguish between the notions of scanning and analysing, it should be noted that scanning refers to search for information whereas analysing refers to the conscious and deliberate processing of information. The resultant information from scanning may become a source for analysing and/or intuiting processes.

Contrary to what is proposed in the original 41 framework (i.e. intuitions being the only source for learning), the evidence in this research points to the use of conscious and rational information processing (i.e. analysing) in parallel to nonconscious and experiential information processing (i.e. intuiting) to generate new ideas that would be explored and fed forward to the group and organisation levels.

10.1.3 Interpreting Process

Since intuiting is a tacit process it is important that the decision makers are able to interpret their intuitions in order to make sense of them. In this respect, Crossan et al (1999) drew attention to the importance of the use of language and metaphors in the interpreting process. Three sub-processes have been identified in the interview data which take place in the interpreting process: dialogue, visualising, and rationalising.
Dialogue

Dialogue is viewed as an essential component of organisational learning and for building common understanding (Schein, 1993). Whilst the recognition of a pattern is an individual process, the interpretation of the recognised patterns is contingent on the conversational process with others (Salas et al, 2010). Consistent with Crossan et al’s (1999) framework, in the interview data there is evidence that the tacitly held intuitions become explicit through development of language in conversation and dialogue.

The findings show that as the first step in trying to articulate and explain intuitive judgements, the participants engaged in dialogue thereby clarifying mental images and refining common language. In most cases, this dialogue took place with others involved in the decision making process through informal or formal chats, discussions or meetings thereby bridging the individual and group levels (Crossan et al, 1999). Whilst this seems to be the common practice, Crossan et al (1999) also stated that people can make sense of their intuitions through an internal conversational process (i.e. ‘talking to one’s self’). This is evident in ‘intuitive hits’ Case 2 and ‘intuitive misses’ Case 2 when the participants were involved in a ‘talk’ with themselves trying to interpret their gut feelings. As organisational learning involves group processes, it is necessary that this internal dialogue be externalised and shared with others.

Visualising

Leonard and Sensiper (1998: 113) noted that the common element of knowing that results from tacit knowledge and intuition “is the inability of the knower to totally articulate all that he or she knows”. In this regard, various researchers suggested that images (including visual imagery) are also important and equally useful in expressing intuitions (Crossan et al, 1999; Sinclair and Ashkanasy, 2005; Sadler-Smith and Shefy, 2007).
It is observed in ‘intuitive hits’ Case 3 that when the Chief Superintendent was trying to explain his mental model of public engagement to the Chief Inspector, he illustrated the concept he had in his mind by drawing it on the board, and then the two senior officers engaged in interpretation of this information through dialogue. In support of the literature, this finding indicates that visual interpretation helps articulation of intuitive judgements. In explaining how they interpreted their intuitive judgements the Chief Inspector noted the following:

"I think it’s the way people’s mind operates, some people’s mind operates best in the written word, and some people’s mind operates within the picture. Now I operate better like Gavin, with the picture, if I can see things and I can picture things on a single piece of paper I’m much more comfortable and then can remember. It’s understanding where the person who’s trying to tell you something is coming from then interpreting what that is, because that’s what it’s all about." [Participant V]

The Chief Inspector’s comment above points to the potential significance of individual differences in information processing, and suggests that visualising versus verbalising is a cognitive style preference. Some people are better in articulating and some are better in visualising. Clearly, the fact that both of the senior officers were able to visualise their intuitive judgements led to an effective interpreting process, and enhanced understanding and dialogue between them.

**Rationalising**

It emerged from the interview data that in the interpreting process when the participants shared their intuitive judgements they tried to justify the underlying rationale behind their intuitions. Various researchers asserted that justifications are post-hoc rationalisations of intuitive judgements (Wason and Evans, 1975; Evans and Wason, 1976) and individuals use moral reasoning as a post-hoc explanation and justification of their intuitions (Sonenshein, 2007). According to Weick (2001: 11) “justifications are compelling sources of meaning because they consist of socially acceptable reasons”, for this reason people attempt to make situations rationally accountable to themselves and others. Weick (1995) asserted that this post-hoc attribution can reflect individuals’ engagement in sense-making processes.
In ‘intuitive hits’ Case 3, there is evidence that in order for the officers to influence the more senior officers regarding the model of public engagement, in the interpreting process they had to post-rationalise their intuitions. One of the officers commented:

"... but if you are challenged about what is your rationale for making the decision part of the culture of this organisation means that it would be quite hard to turn around and say 'it just feels like the right thing to do.'" [Participant T]

It is clear from this statement that intuitive judgements have to be rationalised and reasoned in a logical way in order to make them acceptable to others. This finding is supported by Garvin and Roberto (2001) who stated that reasoning is important in organisational contexts when arguments must persuade executives to authorise courses of action.

10.1.4 Integrating Process

As the learning process moves to the group level, Crossan et al (1999) noted that language plays a critical role and is essential as a means of integrating ideas and negotiating actions with others. The 4I framework provides some insight in relation to the dynamics occurring within the decision making group. Integral to this part of the learning process is the development of the ‘collective mind’ (Weick and Roberts, 1993) and the dominant logic (Prahalad and Bettis, 1986). There appears to be various group decision making processes occurring in the integrating process as discussed below.

*Generating Options, Negotiating, Conflict, Consensus, and Team Development*

Bourgeois and Eisenhardt (1988) argued that when decisions are made in a group setting, the group’s decisions are likely to be influenced by social interaction among the various members of the decision making team. The interview data indicates that in the integrating process the senior officers generated several options and engaged in negotiating these options within the group. As part of this process, disagreement and conflict amongst the team members appear to be common, however reaching
consensus seems to play a significant role in developing shared understanding and taking coherent action. In support of these findings, previous research suggested that management teams whose members challenge one another’s thinking develop a more complete understanding of the choices, create a broader range of options and ultimately make effective decisions (Eisenhardt et al., 1997; Garvin and Roberto, 2001; Roberto, 2004).

For example in 'intuitive hits' Case 1, it is evident that the Chief Inspectors gave the concept of the resource allocation model, based on their intuitive judgements, to two officers who were tasked to design options around that model. When the options were presented to the Chief Inspectors they then negotiated these options with each other. In support of these results, Eisenhardt's (1989) work found that in high-velocity environments decision makers developed many alternatives but only broadly analysed them. Consistent with the findings, Crossan et al (1999) stated that as part of the integrating process, groups create a shared understanding of the situation and negotiate mutual adjustments to their actions. Edmondson et al (2003) suggested that central to the negotiating process are the interests of the involved decision makers. In the above mentioned case, it was evident that from time to time conflict arose among the three Chief Inspectors as they were all trying to be protective of their own divisions. However, in the end they achieved consensus by focusing on what would be the best for the organisation. This created a common interest for them to work towards to achieve the common goal. The senior team members also commented on the fact that having worked to a challenge as such brought them together as a team and developed them collectively.

The successful teams that Eisenhardt and colleagues (1997) studied showed similar characteristics. They appeared to consistently frame their decisions as collaborations rather than competition whereby it was for everyone’s interest to achieve the best solution for the collective. However, it should be noted that this does not necessarily imply homogenous thinking, but requires everyone to share a vision. As Roberto (2004: 1) described “consensus does not mean unanimity, widespread agreement on all facets of a decision or complete approval... Consensus does mean that people have agreed to co-operate in the implementation of a decision. They have accepted
the final choice, though they may not be completely satisfied with it". This notion is evident in ‘intuitive misses’ Case 2 whereby although the HR Director did not agree with the decision to go ahead with the colour-matching event, she accepted the chief officers group’s choice to do so.

**Influencing and Credibility**

It appears from the interviews that for ideas to be accepted, people need to be able to successfully persuade others of the idea’s viability for coordinated action to take place. Following from the previous section, it is evident in ‘intuitive misses’ Case 2 that the Assistant Chief Constable was able to persuade the HR Director to support the colour-matching event on the basis of her personal experience as a female senior officer, and as a result influenced the final decision at the chief officers group. Eisenhardt and Bourgeois (1988) suggested that management teams engage in political behaviour to influence the decision making and that ultimately the most powerful among them determine decisions (Eisenhardt and Zbaracki, 1992). It could also be argued that the Assistant Chief Constable’s intuitive judgement based on her personal experience accounted for a more credible justification to influence the rest of the team than the HR Director’s opposing judgement based on her affective gut feeling.

In another case, ‘intuitive hits’ Case 3, the Chief Superintendent was able to influence not only the SMT but also the external partners to deliver the change across the organisation, hence facilitating organisational learning. He attributed this ability to influence others to his personal credibility as an effective leader within and outside the organisation.

**Consulting and Validating**

The emerging evidence from the study suggests that not all the members of the SMT have to be involved collectively in the integrating process. Management team members and people outside the SMT are consulted based on their expertise of the subject, and may become involved to contribute to the decision making process.
(Roberto, 2003). This is in line with Eisenhardt's (1989) finding that decision makers obtain advice from one or more of the organisation's most experienced executives whom they trust. This is observed in 'intuitive hits' Case 2, right after the Assistant Chief Constable had an intuitive judgement regarding the proposed dinner event, he consulted the Chief Constable and the Finance Director to get their professional advice on the situation. It has also become apparent that by approaching them with a formed judgement, he was seeking to check what their intuitions told them in order to validate his own gut feeling.

**Reputation, Empowering, Accountability, and Values**

In the integrating process it is observed that several factors contribute to the decision making of the SMT. Particularly, reputation of the organisation emerged as a significant consideration which determined the actions of the management teams due to its impact on public’s perception of the performance of the police in general. This is evident in 'intuitive hits' Case 2 and 'intuitive misses' Case 2 whereby in both cases the decision to cancel the events were on the basis of not jeopardising the reputation of the organisation.

The role of the leadership is significant in trying to empower people and inspire commitment (Arvedson, 1993), inflicting a sense of accountability that binds people to consequences (Tetlock, 1991). In 'intuitive misses' Case 1, it appeared that when the drugs search operation failed the SMT took immediate actions to recover the situation as quickly as possible in order to minimise the damage on the organisation's reputation. The management team also took responsibility as an organisation for the mistake of the operations team and, instead of punishing them, empowered the officers concerned on the basis of the values for "doing the right thing for the right reasons within the culture of the organisation" as one senior officer put it. Hambrick and Mason (1984) suggested that it is the manager's perception of the situation with his/her own values which influences the manager's decision making. It is observed in this case that management exercised discretion to learn from this incident and move on.
Communicating and Involvement

According to Schein (1993) dialogue at the executive level is not enough for the organisational learning to occur. The process of communicating across the hierarchical levels of the organisation requires further dialogue. In the case studies, there is evidence of communication occurring to varying degrees within different organisations. As observed in ‘intuitive hits’ Case 1 and Case 3, the SMTs mentioned the difficulty they had experienced in selling their ideas to the grass roots and involving the members of the organisation to participate in the change process. This was mainly attributed by the team members to their lack of communicating the management team’s vision to the lower levels of the organisation, and involving them in the decision making process. A similar situation is also observed in ‘intuitive misses’ Case 3 whereby the senior management’s efforts to relocate staff failed due to not involving the staff concerned in the decision making process.

These results suggest that for learning to move from group to organisation level, the knowledge held within the senior teams needs to be passed on to the lower levels of the organisation. It could be argued that it is the responsibility of the leadership to initiate integrating process of learning to evolve within the organisation. This could be facilitated by establishing a mechanism that enables individuals and groups to participate in the development of strategy, structures and procedures. Bass (1998) argued that when people understand where they fit into the larger pattern envisaged by the top management they are motivated to offer their ideas. In this respect, Vera and Crossan (2004) suggested various leadership styles which would be relevant to understanding the role of the leader in organisational learning.

10.1.5 Institutionalising Process

Institutionalising is a significant process of organisational learning. Having been integrated, the ideas must then be institutionalised in order to impact on the future of the organisation (Crossan and Berdrow, 2003). In this respect, learning has to be embedded within the organisation’s systems, structures, procedures, and routines “to ensure that certain actions occur” (Crossan et al, 1999: 525).
Consistent with Crossan et al.'s (1999) view, the interview data revealed that SMTs established formal procedures and embedded learning into the organisations' systems in order to leverage and capitalise on individual and group knowledge. This is what the researcher called 'systematising' and is evident in three out of the six case studies. For example in 'intuitive hits' Case 1, in the restructuring of the organisation the senior officers, by use of their intuitive judgements, redesigned the resource allocation model, and gave clarity around the roles and functions within the divisions establishing consistent processes throughout the organisation. In 'intuitive hits' Case 3, the intuitive judgements of the senior officers were captured in the development of the model of engagement with the public and neighbourhood policing teams were established based on that model. It emerged from these two cases that as time went on the management teams assessed the institutionalised learning and assimilated new ideas leading to further adjusting of the embedded structures and procedures. In 'intuitive misses' Case 3, having failed in their attempts to relocate the Sergeants, the senior officers established the Talent Management Scheme to provide them with a pool of officers who would want to advance in their careers, and therefore would be more willing to take on the challenges offered by the management. It appears that the senior management deliberately put a system in place that would help them avoid a similar incident in the future. Interestingly, this is the only 'intuitive misses' case whereby the senior management institutionalised their learning from the critical incident.

The findings from the other cases revealed that individual and group learning does not always get embedded within the organisation's systems, structures and procedures. It is observed that in the remaining three cases no formalised procedures have been developed as a result of the learning experiences, hence the institutionalising process has not occurred. In 'intuitive hits' Case 2, by acting early to cancel the dinner event, the chief officers were able to avoid potentially negative implications of this incident. In regard to not institutionalising this learning, the participants stated that they would not want to make a rule out of this incident to forbid proposal of such events, as in the future they might want to approve a similar
event that would attract bad press. It appears that the chief officers made a conscious
decision by not formalising this learning experience in order to not limit their future
actions. In relation to the other two cases, ‘intuitive misses’ Case 1 and Case 2, the
outcomes of following intuitive judgements in making the decisions have been
negative which jeopardised the reputation of the respective organisations. However,
there appears to be a belief by the senior officers that the high profile of these
incidents had an impact on everyone in the organisation leading to an implicit
learning whereby nobody would want to repeat the same mistake again. As a result,
no corrective actions have been taken in order to formally institutionalise this
learning within the organisation.

In regard to these findings, it is argued that organisational learning is not complete
until learning is embedded in the organisational memory (Argyris and Schön, 1978;
Huber, 1991; Crossan et al, 1999). If learning is not embedded in the organisation, it
cannot be fed back to organisational members where it can have an impact on their
performance and success. Without the process of institutionalising, organisations run
the risk of failing to learn from their experiences (Wiseman, 2007). Previous
research addressed the difference between learning from success and learning from
failure (Baumard and Starbuck, 2005; Cannon and Edmondson, 2005) suggesting
that few organisations make effective use of failures for learning. The evidence
indicates that learning from failure is a result of very conscious efforts by managers
which suggests that organisations could avoid large failures by paying more attention
to small failures.

Drawing upon insights from Huber’s (1991) work, organisational memory is the
means by which knowledge is stored for future use. It is argued that human
components of organisational memories are often less than satisfactory due to
inaccurate learning and incomplete recall (Kahneman et al, 1982). Additionally,
learning which remains with individuals and groups runs the risk of being forgotten
in time or leaving with people when they leave the organisation. For this reason,
organisational knowledge about how to do things are stored in the form of standard
operating procedures, routines, and scripts (March, 1991; Huber, 1991). This
suggests that the SMTs are responsible for embedding knowledge gathered from
individual’s intuitions at the organisation level for it to be recognised as an institution of the organisation and be accessible for reuse, and to influence future behaviours and actions.

10.2 Role of Intuition in Decision Making

The thorough investigation of the organisational learning processes provided insights into the role intuition plays in decision making. In this regard, the comparison of the ‘intuitive hits’ and ‘intuitive misses’ revealed a significant finding which sheds some light on understanding what constitutes the effective use of intuitive judgements in managerial decision making (i.e. when does intuition ‘hit’ and when does it ‘miss’).

Baron (2004) stated that many factors determine the relative rate at which individuals experience hits, misses, and false alarms in any given situation. He asserted that some of these factors are physical and relate to the properties of the stimuli (i.e. the stronger the stimulus, the easier to be certain); some relate to the current state of the perceiver (e.g. fatigue, high/low motivation to make correct determinations); and others involve the subjective criteria perceivers apply to the task.

The evidence emerged from this study suggests that what determines whether intuition will hit or miss is the decision maker’s involvement in analysing alongside intuiting. In the research data, it appears that in all three cases of ‘intuitive hits’ the senior officers engaged in deliberate analysis of information from external sources. It seems that this occurred either before, after, or during the intuiting process to varying degrees depending on the availability of information and time to come up with a decision. On the other hand, analysis of ‘intuitive misses’ revealed decision making as a more complex trajectory whereby there appears to be lack of analysing in all three cases. As discussed earlier, only in Case 1 some analysing took place, however the information gathered was inadequate and inaccurate. In the other two cases there is no evidence of analysing taking place alongside intuiting.
These findings indicate that the processes of intuiting and analysing complement one another in the making of effective decisions, a view consistent with the dual-process perspective (Stanovich and West, 2000; Epstein, 1994). In support of these results, Klein (2003) stated that neither analysis nor intuition alone is sufficient for effective decision making, and that decision makers can go wrong if they rely excessively or exclusively on intuition or analysis. Similarly, Sadler-Smith and Shefy (2004) suggested that executives might achieve a more balanced perspective by considering both rationality and intuition as complementary and mutually reinforcing components of a decision strategy. Patton (2003) asserted that how much of the added insight will be intuitive and how much of it will be the result of analysis is a mute question. Accordingly, whether intuition adds a small proportion of the beneficial impact or most of it is of little importance. The point is that developing habits which add to intuition and to better analysis of situations will improve decision making.

Crossan et al’s (1999) 4I framework suggests that intuitions are the only source of learning. The emerging evidence in this research points to the limits of this view by providing evidence that depending only on intuitive judgements to respond to critical incidents may prove fallible and lead the decision maker to ‘intuitive misses’. The research findings indicate that the decision makers use analysing and intuiting together to generate ideas that would lead to effective decision making (i.e. ‘intuitive hits’). The ideas generated through intuiting and analysing will be explored at the individual level and be fed forward to the group and organisation levels. In this respect, these results suggest the incorporation of analysing into the intuiting process in order to acknowledge the presence of both information processing systems in effective decision making processes that would lead to organisational learning. In light of this argument the following framework of organisational learning is proposed (Figure 10.1).
In closing this section it seems important to emphasise that the process of institutionalising is clearly important for capitalising on the managers' intuitions. For organisational learning to be complete, the successful implementation and embedding of the managers' intuitive judgements is required. As discussed earlier, this will depend on the senior management's conscious efforts to embed the learning into the organisation's systems, structures, strategies and procedures making them a part of the routines of the organisational practices.

10.3 Conclusion

In summary, this research applied Crossan et al's (1999) 4I framework of organisational learning to the processes of decision making at three police organisations. Following a rich synthesis and discussion of these organisational
learning processes, this chapter draws a number of significant conclusions as emerged from the findings of the research.

- There appears to be an additional process in the 4I organisational learning framework prior to the intuiting process, which the researcher named the 'initiating' process. The basic premise of this finding is that decision making is context specific. Therefore, the nature of the situation triggers the information processing approach to decision making. The decision environment comprising factors such as complexity, uncertainty, and time pressure call for an intuitive approach to decision making.

- The evidence suggests that both expertise and affect are legitimate sources of intuitions. Additionally, the findings revealed that there is an element of scanning in the intuiting process in search for information that would feed into the intuiting of the decision maker. It is evident that for effective decision making intuiting is complemented by use of analysing. The results suggest that both information processing systems working in parallel is likely to lead to an 'intuitive hit', and the lack of analysing in the intuiting process is likely to lead to an 'intuitive miss'.

- The (intuiting) individual's capability of verbal and/or visual interpretation appears to play a significant role in being able to articulate, or otherwise communicate, their intuitive judgements to themselves and to others in order to make sense of this tacit knowledge. It appears that in moving from individual to group level, people deliberately attempt to rationalise their intuitive judgements by providing justifications in order to make them socially acceptable to others.

- The findings suggest that the integrating process involves various group decision making processes, and is influenced by the dynamics and interactions taking place within the SMTs. As in the previous process, dialogue seems to play an important role in group interactions such as communicating, negotiating, consulting, influencing, conflict, and consensus building in order to develop shared understanding leading to coordinated action. For the learning to be fully
integrated, and move from group to organisation level, it appears imperative that the senior management communicates the 'collective mind' across the hierarchical levels of the organisation, and establishes mechanisms to involve the entire organisation in the decision making process.

Finally, the results of this study indicate that the establishment of formal systems, structures, and procedures facilitate the institutionalisation of learning, however it is also revealed that not all individual and group learning is institutionalised on the organisation level. Particularly, there is convincing evidence that organisations fail to learn from their failures by not implementing corrective actions to influence future success. For organisational learning to be fully realised, there needs to be conscious effort on the part of the senior management to capitalise on their managers' intuitions by embedding the knowledge into the routines of the organisational practices.
Chapter 11  Conclusion

11.0 Introduction

This chapter concludes the thesis. It is organised in five sections: the first section summarises the research studies undertaken in this thesis; the second and third sections highlight the theoretical contributions and managerial implications respectively; the fourth section discusses the limitations of this research; and finally the fifth section provides directions for future research.

11.1 Summary of Research

This thesis explored the role of intuitive judgement in collective decision making as it pertained to the organisational learning processes at three police organisations in the UK. In this respect, the thesis integrated three separate lines of research in management: intuition, decision making, and organisational learning. Whilst organisational learning has been researched extensively in literature, the role of intuition in this process has not been investigated fully. Similarly, while much is known about the rational-analytical ways of knowing in decision making, relatively little research has been undertaken in relation to intuition and its role in decision making. This research aimed to respond to the challenge to advancing knowledge and understanding of this phenomenon, and its role in collective decision making and learning from the individual and organisational perspectives.

More specifically, the thesis addressed the following research questions:

RQ1  Are there individual differences in the use of intuitive (experiential) and analytical (rational) thinking (cognitive) styles amongst members of police organisations;

RQ2  Do senior managers use intuitive judgement in decision making, and under what circumstances do they use it;
RQ3  How effective are intuitive judgements perceived to be (for example, when does intuition ‘hit’ and when does it ‘miss’?);

RQ4  Do ‘good’ and ‘bad’ intuitions become embedded within the organisation’s systems and structures, if so how, and what are the consequences;

RQ5  How does intuiting lead to organisational learning, and how can intuitions be capitalised upon as a source of organisational learning?

In an attempt to gain a deeper understanding of the role of intuitive judgement in managerial decision making a pilot study and two main studies were carried out. To address RQ 1, Study 1 employed the Rational Experiential Inventory (REI, Pacini and Epstein, 1999), a self-report inventory for measuring rational and experiential thinking styles, with the aim to explore the individual differences in intuitive and analytical information processing by police officers and police staff in their work, across different job levels and job types in two different organisations. The findings are highlighted below.

(1) Study 1 revealed that there was no gender difference in terms of the intuitive thinking style. This finding was in support of previous research claiming against the traditional belief that women are more intuitive than men. Additionally, and as anticipated, the police officers appeared to be more intuitive than police staff. However, there was lack of support to confirm that intuition is positively related to job level or experience. This result was surprising given the expertise-based view of intuition suggesting that senior managers are more intuitive than their less experienced and more junior colleagues; however, it is consistent with previous empirical findings. The study clearly showed that intuition is an important aspect of decision making in police work for both officers and staff.

To address RQ 2 to 5, Study 2 used the concepts of ‘intuitive hits’ and ‘intuitive misses’ as derived from the pilot study to investigate the intuitions of the SMTs at three police organisations. The ‘intuitive hits and misses’ typology is an analytical tool which was developed in the pilot study through the application of Flanagan’s (1954) CIT. In Study 2 a multi-case study approach was adopted. Crossan et al’s
(1999) 4I model was employed as the underlying theoretical framework, combined with the method of CIT, to gather retrospective accounts from senior police officers of instances where intuitive judgement led to effective and ineffective organisational outcomes. In-depth data was collected based on semi-structured focus group interviews with SMTs.

Study 2 provided a thorough investigation of six case studies into the role of intuition in collective decision making and learning from an organisational perspective. Particularly, this study successfully fulfilled its objective to provide answers to the questions that this research set out to explore in the senior management context of three police organisations. These are summarised below.

(2) It is clear from the findings of Study 2 that senior police management teams acknowledged and claimed their use of intuition in decision making under both strategic and operational contexts. It appeared that decision environment comprising factors such as complexity, uncertainty, and time pressure call for an intuitive approach to decision making.

(3) The comparison of 'intuitive hits' and 'intuitive misses' revealed what constitutes the effective use of intuitive judgement in managerial decision making. The results suggested that what determines whether intuition will 'hit' or 'miss' depends on the decision makers' use of rational-analytical cognition alongside intuitive judgement. Whilst the 'intuitive hits' clearly showed the use of both information processing systems in parallel, this was not evident in the 'intuitive misses'.

(4) Results of the research indicated that intuitions that feed into the senior managers' decision making may become institutionalised by way of being embedded within the organisation's systems, structures, procedures, and practices (two out of three 'intuitive hits' were institutionalised). When the learning is institutionalised, it becomes a part of the organisational routines. However, there is also evidence that some individual and group learning may not be institutionalised. The findings suggested that organisations fail to learn from their failures by not implementing corrective actions (two out of three 'intuitive misses' were not institutionalised), the
consequence of which is that they potentially run the risk of making the same mistakes again in the future.

(5) The emerging evidence suggested that for intuitions to become a source of organisational learning depends on several factors: first, the intuiting individuals ought to be consciously aware of their intuitions in order to capture them; second, they need to be able to interpret their intuitive judgements in order to make sense of them, and to communicate them explicitly to themselves and to others; third, for intuitions to be integrated, a collective understanding and consensus needs to be achieved within the decision making group and followed by coordinated action. The process of institutionalising appeared to be significant for capitalising on the managers’ intuitions. This required a conscious effort on the part of the senior management to embed learning into the organisation’s systems, structures, and strategies, and make them part of the routines of the organisation’s practices.

The research results are significant in that they provide new understandings and insights with a particular emphasis on the ways in which the tacit knowledge that forms the basis for intuitions may be institutionalised within organisations ultimately leading to organisational learning. The findings reveal that intuition acts as a catalyst for the organisational learning process: it affects both individual and collective actions; it therefore has the potential to influence and inform not only individual learning but also collective interpretation, and the development of shared meaning and sense-making within an organisation.

The contribution of these findings to theory and practice of management is discussed in the following sections.

11.2 Theoretical Implications

This section highlights the significant contributions of this research to theory particularly on intuition, decision making, and organisational learning literatures, and identifies several methodological contributions.
11.2.1 Contributions to Intuition and Decision Making Literatures

Against the backdrop of research on the role of rational-analytical ways of knowing in decision making in management, relatively little is known about the way intuitive judgement manifests itself in organisations in general and in relation to learning in particular. In this respect, this research contributes to the theoretical development of the subject of intuition in management by integrating three streams of research – intuition, decision making, and organisational learning – which have not been well-connected previously.

Furthermore, there appears to be a lack of research on decision making in the context of police management teams. The extant literature is mainly concerned with the operational side of police work which takes place on the lower levels of the organisational hierarchy, however it does not inquire into the managerial decisions made in the SMTs. This gap in the literature represented an opportunity to provide new insights and understanding of the role of intuition in decision making in senior police management teams. To the best of the researcher’s knowledge, this study is the first to examine intuitive decision making in senior police management teams.

Intuition research has previously been based on individual level of analysis whereas the current research examined it at the individual as well as the collective level thus bridging these two levels of analysis. Therefore, the thesis contributes by studying collective intuitive decision making. The key findings relating to the characteristics of intuition are consistent with some of the previous theoretical and empirical conceptualisation of the subject. The investigation of intuitive decision making in the setting of the SMTs has revealed collective intuiting process taking place within groups. This finding provides a novel contribution to the theoretical underpinning of this phenomenon.

Previous research on managerial decision making has mainly focused on the success stories of senior managers showing only the up-side of the role of intuition in decision making. However, the current research explored both effective (i.e. successes) and ineffective (i.e. failures) decisions which were based on intuitive
judgements. The investigation of ‘intuitive hits’ and ‘intuitive misses’ painted arguably a more realistic picture of the perceived effectiveness of intuition in the context of managerial decision making, and contributed significantly to our understanding of when it is likely to ‘hit’ and when it is likely to ‘miss’.

11.2.2 Contributions to Organisational Learning Literature

This research adopted Crossan et al’s (1999) 4I model as the underlying framework to explore the organisational learning processes at three police organisations. This was chosen due to its explicit acknowledgement of the role of intuition in the organisational learning process. Crossan and Berdrow (2003) stated that future research on the 4I would benefit from a contrast and comparison of patterns of learning across organisations in a comparative case study approach. In this respect, the current research responds to this call, and in doing so contributes to the organisational learning literature in several ways as outlined below.

In particular, this research revealed several sub-processes within each of the 4I learning processes, and provided empirical support to the characteristics of the intuiting, interpreting, integrating, and institutionalising processes in relation to the dynamics affecting individual, group and organisation levels of learning. Previous research, albeit limited, focused on expanding the 4I model, however has not elaborated on the originally proposed processes in such great detail. As such, the current research presents a comprehensive study of the 4I framework and provides an enhanced understanding of the underlying foundations of these four processes.

Furthermore, this research also contributes to the development of the 4I model as a conceptual framework. The findings revealed that there is an additional process of ‘initiating’ which sets the decision context leading to the intuiting process. Dutta and Crossan (2005: 435) claimed in a later paper that Crossan et al (1999) acknowledge that there is an environment or more accurately “stimuli” that influence individual and organisational learning, but this was not obvious in their discussion of the framework in the original paper, and it was certainly not integrated into their model. Additionally, and contrary to Crossan et al’s (1999) suggestion that intuitions are the
only source of learning, the emerging evidence from this research indicated that there is an element of ‘analysing’ used alongside the intuiting process. This finding lends support to the dual-process perspective in that intuition and analysis should be treated as complementary processes necessary for effective decision making. As such, the findings of ‘initiating’ as an additional process prior to intuiting, and ‘analysing’ alongside the intuiting process present an important development on the original model.

As has been commented by previous researchers (e.g. Kleysen and Dyck, 2001), Crossan et al (1999) left room for further improvement of their framework by acknowledging, but not identifying, the feedback processes of organisational learning in their proposed model. Whilst the current research only focused on the feed forward learning processes (i.e. from individual to organisation levels), it appears imperative for completeness’ sake that Kleysen and Dyck’s (2001) addition of ‘encoding’ to represent feedback learning from organisation to group level, and ‘enacting’ from group to individual level are recognised and thereby adopted. Another important addition on to the 4I model is by Jones and Macpherson (2006) who incorporated an inter-organisation level of learning, called the process of ‘intertwining’. The introduction of this additional level, which reflects learning between organisations, is a significant step to broaden the conceptualisation of organisational learning. As a result, the amalgamation of these previous additions with the current findings of this research provides a complete and enhanced picture of Crossan et al’s (1999) 4I framework, and thereby creates a 6I model of organisational learning (see Figure 11.1).

As presented in Figure 11.1 in the 6I framework organisational learning comprises six processes of initiating, intuiting, interpreting, integrating, institutionalising, and intertwining which take place over five levels: decision context (i.e. environment), individual, group, organisation, and inter-organisation.
11.2.3 Methodological Contributions

In addition to the theoretical contributions as outlined above, this research also makes a number of methodological contributions. The majority of previous research on intuitive decision making has been based on quantitative studies. The current research adopted a more comprehensive approach by employing both quantitative and qualitative methods, and particularly makes a significant contribution to the empirical investigation of intuition in management context by providing a major qualitative study of six decision making and organisational learning processes in senior police management teams.
This research also makes a novel contribution in terms of the research method applied. It employed Flanagan’s (1954) CIT in focus group interviews which, to the best of the researcher’s knowledge, is not well represented in existing literature.

Finally, the intuition-decision outcome typology has been developed through the application of the CIT in the pilot study of this research, and the emerging concept of ‘intuitive hits’ and ‘intuitive misses’ was employed in Study 2. This is a unique analytical tool for the investigation of effective and ineffective intuitive decision making processes.

11.3 Managerial Implications

Besides the academic community, this research is also relevant to the wider practitioner communities of the police authority and senior managers in general. Particularly for the police community, the overall potential impact of this research is significant in that the findings of the current research are intended to contribute to the development of a national decision making model that may assist police forces in the UK in integrating intuition into their strategic and operational decision processes (the latter is the subject of on-going research).

In light of the findings and conclusions of this study, a number of managerial implications are highlighted and practical recommendations are made for police and management practitioners.

- The evidence suggests that intuition is an important aspect of decision making in police work both in lower levels and senior levels of the hierarchy. In this respect, it is promising that police officers in all levels of the organisation recognise the significance of, and employ their intuitive judgements in decision making. Clearly, there are many benefits of using intuitive judgements for police officers and managers, such that it can enhance the decision making by identifying similar patterns, which aids in the acceleration of the decision making process. Police organisations might usefully include intuition in their policies and procedures, and on training programmes.
The findings suggest that intuition and analysis should be treated as complementary modes of information processing for effective decision making. The extent to which each is relevant or should be used depends on the circumstances as well as the decision maker's level of experience and knowledge in the specific domain and context.

It is recommended that managers recognise intuiting as a valid way of information processing in decision making and problem solving, and not just see it as a mysterious phenomenon. Managers can develop habits to become aware of automatically appearing intuitive judgements; it is by paying conscious attention that they will be able to capture their intuitions. However, they should be as aware of the perils of intuition as well as of its power.

Equally important is the managers' ability to interpret and make sense of their intuitive judgements individually and collectively. Accordingly, tacitly held intuitions need to become explicit and openly communicated with others in order to interpret, share and use them. Evidence suggests that collective intuitions are also a potentially powerful resource, and strengthen the validity of and help to build individual intuitions. Therefore, managers should willingly voice their intuitive judgements in managerial decision making and encourage their team to do the same. In this way a ‘kind’ as opposed to ‘wicked’ environment for the learning of intuitions may be produced.

An up-side of intuitions is that they are difficult to imitate and hence a rare and valuable source of competitive advantage for organisations. However, the downside of intuitions is that they are tacitly held knowledge which is difficult to teach or transfer onto others. This indicates that when managers leave the organisation their knowledge and expertise also leaves with them. Therefore, for organisations to benefit from the intuitions of their senior managers it is imperative that intuitions are capitalised upon by being embedded in the organisation's memory. This requires a conscious effort on the part of the senior management to formally institutionalise them within the organisation's strategies, systems, and structures.
11.4 Limitations of Research

Besides several significant contributions to theory and practice, this work also is subject to some limitations. As far as the first part of the research is concerned, the main drawback is in regard to the use of self-report measure employed in Study 1. At present, self-report measures are still the most commonly used method in studying individual differences in analysis and intuition. As a result, researchers are limited in terms of the available options for methods other than self-report inventories. However on the positive side, it should be noted that REI as a method represents a well established measure consistent with the dual-process view. Similarly in regard to Study 2, the qualitative data collected relied on self-report by participants through interviews. One problem with this method is that retrospective accounts may be biased in several ways. For example, participants may use hindsight to rationalise the past. Furthermore, there can be problems to do with imperfect or inaccurate recall. These can be viewed as a limitation of this study. However, it could be argued that this effect is minimised in the focus group interviews due to the fact that this method of interviewing provides an open discussion environment whereby the participants could reflect on each other’s accounts and shared experiences, hence aiding the accurate recall of events in discussion. However, the down-side of focus group interviews is that not all participants may feel comfortable to discuss issues in the presence of their colleagues. Additionally, while qualitative data collecting seems to be a promising tool for in-depth studies, there is always the problem of subjective interpretation of the data which lies with the researcher.

At the beginning of the study the participants were informed of the definition of intuition and what it means in terms of the objectives of this study, and the researcher affirmed this understanding on the part of the participants. In this respect, Study 2 of this research presented what the participants described as ‘intuitive hits’ and ‘intuitive misses’. Nevertheless, in relation to whether they were in fact intuitions or not, the potential limitation lies with different perceptions of people and their varying levels of understanding of the phenomenon of interest. Furthermore, the case studies were based on what the participants chose to tell the researcher in semi-structured interviews. Whilst some of them chose decisions which were more strategic in
nature, others preferred to talk about tactical or operational ones. It is also possible that some of them have not shared information to the same extent as the others due to confidentiality of information or time restriction.

The current research is solely focused on the police community, hence it is acknowledged that the generalisability of this study's findings is context-specific and therefore may be restricted in its application to other domains. This is particularly the case for Study 1 which examined the individual differences in information processing across different levels of police ranks and job types. On the other hand, although Study 2 is concerned with decision making processes in senior police management team context, the examples of decisions were more relevant to generic managerial issues rather than policing (e.g. the management of the BCU). Therefore, it would be argued that the underlying elements of the discussions and conclusions developed from this study would be relevant to and present in other organisations. To conclude, the overall intention was not to generalise the pattern of learning found at these police organisations, but to provide a generalisable framework that can be used to understand organisational learning processes more widely.

11.5 Directions for Future Research

A future research agenda might build on the insights and contributions of this thesis. In this respect, three areas would appear to be promising for next steps of research to extend the boundaries of our understanding of the role of intuition from an individual and organisational perspective in relation to its manifestation in managerial decision making and organisational learning.

As discussed in the limitations of this research, this work only focused on the decision making and organisational learning processes in the context of police organisations. Further research could address this limitation by replicating this research in other public and private organisations, or in different industrial settings. This would be important to understand whether the findings of the current research are representative of the approach taken in organisational learning in general or only relevant within the context of this research. It could be taken even further by
conducting a cross comparison of public and private organisations, or between industries. Cultural comparison of intuition in managerial decision making and organisational learning would also be particularly informative.

This research only examined feed forward processes of organisational learning as proposed in Crossan et al’s (1999) 4I framework. Whilst limited conceptualisations have been developed in respect to feedback learning, there is a lack of empirical literature on this phenomenon. Crossan et al (1999) were not able to provide much insight into what they called feedback learning. In their original introduction of the 4I framework, the authors suggested that feed forward and feedback represent the processes of exploration and exploitation respectively. However a decade later, Jansen, Vera and Crossan (2009) showed that both exploration and exploitation take place in both feed forward and feedback processes of learning. In this respect, there appears to be a lack of clarity in terms of what feedback and feed forward represent. It is imperative that this relationship is investigated through empirical research in order to advance our understanding of these processes, and also to empirically validate Kleysen and Dyck’s (2001) conceptual development of ‘encoding’ and ‘enacting’ processes that represent feedback learning from organisation to group and group to individual levels.

In future, researchers could also try different methods other than relying on self-report techniques. For example, research could benefit from real-time direct observation of decision making and organisational learning processes. However, since organisational learning is a long term process, this would require longitudinal studies of probably a limited number of organisations. This represents a major challenge for researchers as these processes may occur over long periods of time and may not take place within the confines of a series of SMT meetings. There is also the problem of observing intuitive aspect of decision making, which would nevertheless have to depend on the articulation and interpretation (i.e. self-report) of the participants.

To conclude, this thesis has provided a novel contribution to a significant subject in management. The current research was conducted in three police organisations in the
UK, as such the findings are not claimed to be representative in any manner. The findings do however provide insights that can form the foundation of future research into this important topic. It is the wish of the researcher that this contribution will be built upon by other researchers in order to further explore an important and over-theorised but under-researched organisational phenomenon.
References


320


Appendix 1

Screen Print of Online Survey
Dear Participant,

The following survey is part of a research study that investigates the role of intuition in decision making in police work. In this respect, your collaboration is vital.

The survey consists of 40 items to be rated on a 5-point scale to range from 1 (completely false) to 5 (completely true), which should take less than 10 minutes of your time.

The survey is anonymous and the information you provide will be treated in the strictest confidence.

Thank you in advance for your valuable contribution to this study.

Cwia Akindi
PhD Researcher
University of Surrey

1. Age

2. Gender
   - Female
   - Male

3. Name of Organisation

4. Job Level
   - Please Select

5. Job Type
   - Please Select
3. Name of Organisation

4. Job Level
   - Please Select -

5. Job Type
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6. Length of police experience:
   Years:
   Months:

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<td>I enjoy intellectual challenges.</td>
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<td>I believe in trusting my hunches.</td>
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I usually do not rely on intuition. Thinking hard and for a long time about something gives me some satisfaction. I think it is foolish to make important decisions based on feelings. I am much better at figuring things out logically than most people. I generally don't depend on my feelings to help me make decisions. I enjoy thinking in abstract terms. My snap judgments are probably not as good as most people's. Using logic usually works well for me in figuring out problems at work. Knowing the answer without having to understand the reasoning behind it is good enough for me. Learning new ways to think would be very appealing to me.
Appendix 2

Rational Experiential Inventory Items
Rational Experiential Inventory Items

**Rationality Scale**
- I try to avoid situations that require thinking in depth about something.
- I am not good at figuring out complicated problems.
- I enjoy intellectual challenges.
- I am not very good at solving problems that require careful logical analysis.
- I don’t like to have to do a lot of thinking.
- I enjoy solving problems that require hard thinking.
- Thinking is not my idea of an enjoyable activity.
- I am not a very analytical thinker.
- Reasoning things out carefully is not one of my strong points.
- I prefer complex problems to simple problems.
- Thinking hard and for a long time about something gives me little satisfaction.
- I don’t reason well under pressure.
- I am much better at figuring things out logically than most people.
- I have a logical mind.
- I enjoy thinking in abstract terms.
- I have no problem thinking things through carefully.
- Using logic usually works well for me in figuring out problems in my life.
- Knowing the answer without having to understand the reasoning behind it is good enough for me.
- I usually have clear, explainable reasons for my decisions.
- Learning new ways to think would be very appealing to me.

**Experientiality Scale**
- I like to rely on my intuitive impressions.
- I don’t have a very good sense of intuition.
- Using my gut feelings usually works well for me in figuring out problems in my life.
- I believe in trusting my hunches.
- Intuition can be a very useful way to solve problems.
- I often go by my instincts when deciding on a course of action.
- I trust my initial feelings about people.
- When it comes to trusting people, I can usually rely on my gut feelings.
- If I were to rely on my gut feelings, I would often make mistakes.
- I don’t like situations in which I have to rely on intuition.
- I think there are times when one should rely on one’s intuition.
- I think it is foolish to make important decisions based on feelings.
- I don’t think it is a good idea to rely on one’s intuition for important decisions.
- I generally don’t depend on my feelings to help me make decisions.
- I hardly ever go wrong when I listen to my deepest gut feelings to find an answer.
- I would not want to depend on anyone who described himself or herself as intuitive.
- My snap judgments are probably not as good as most people’s.
- I tend to use my heart as a guide for my actions.
- I can usually feel when a person is right or wrong even if I can’t explain how I know.
- I suspect my hunches are inaccurate as often as they are accurate.

Source: Pacini and Epstein, 1999
Appendix 3

Path Diagrams for Study 1
Model 1:
Experientiality and Rationality
Model 2:
Experientiality, Rational Engagement, and Rational Ability
Model 3:
Experientiality Positively-worded, Experientiality Negatively-worded, and Rationality
Model 4:
Experiential Engagement, Experiential Ability, Rational Engagement, and Rational Ability
Model 5: Experientiality Positively-worded, Experientiality Negatively-worded, Rational Engagement, and Rational Ability
Appendix 4

Interview Protocol for Pilot Study
Interview Protocol for Pilot Study

Objective:
The aim of this research is to explore senior managers’ experiences of intuition in order to find out whether they use intuitive judgement in their decision making, and if they do, what properties do they ascribe to intuition and what are the factors which influence its use?

Procedure:
Introduce myself.
Introduce the research project by providing a copy of the project summary.
Clarify confidentiality and code of ethics.
Ask interviewee’s permission to tape-record the interview.

Part 1: Demographic Details

1. What is your current position?
2. What are your major responsibilities in the organisation?
3. How long have you worked in your current position?
4. How long have you been in the top management team of your organisation?
5. How long have you worked for your current organisation?
6. How long have you worked in your industry?
7. What is your highest degree earned?

Part 2: Use of Intuition

1. Do you rely on intuitive judgement in making important decisions? If yes, to what extent?
2. What are the factors that influence the use of intuition in your decision making?
3. Under what circumstances do you use intuitive judgement in making strategic decisions?
4. Under what conditions do you feel that intuitive judgement is an effective means of making strategic decisions?
Part 3: Investigation of Critical Incidents

1. Describe a critical/significant experience which led to a positive outcome, that is an example of a time when you used gut feel/intuition in making a strategic decision.
   ▪ What were the events that led up to the critical incident?
   ▪ What were the actions taken by you and/or other people involved?
   ▪ What was the outcome of that incident?

2. Describe a critical/significant experience which led to a negative outcome, that is an example of a time when you used gut feel/intuition in making a strategic decision.
   ▪ What were the events that led up to the critical incident?
   ▪ What were the actions taken by you and/or other people involved?
   ▪ What was the outcome of that incident?

Part 4: Further Comments

1. Do you have any further comments?
2. Is there anyone else you would recommend me to contact who could contribute to this research?
Appendix 5

Interview Questions for Study 2
Focus Group Interview Questions

Background of the Decision:
1. What was the background of the situation? What led up to it?
2. When did it happen?
3. Who were involved?
4. Did you have a similar previous experience or was it the first time that you encountered this kind of a situation?

Decision Making Process:
5. Tell me what happened. What did you do?
6. Who was the person to first raise their intuition about the situation? One person or more? Same intuition or different?
7. How were you initially aware of your intuition?
8. How did you make sense of your intuition?
9. How did you communicate your intuition?
10. Who did you share your intuition with?
11. How did you develop a shared understanding of your intuition within the team? (i.e. how did you ‘sell’ your intuition to the other team members?)
12. How did your team respond to it? Has anyone raised any objections or counter arguments? What happened?
13. How did you feel about it? (i.e. did it ‘feel right’ or ‘feel wrong’?) Has anyone had any doubt about acting on their intuition? Explain why.
14. Did you generate different alternatives or consider other options? If yes, how much time did you spend researching alternatives?
15. How long did the process take from the initiation of the idea to the implementation of the decision?

Decision Outcome:
16. What was the outcome of this decision?
17. If positive outcome: what were the factors that made your decision successful?
   If negative outcome: why do you think your intuition failed you in making the right decision?
18. Have you developed any routine practices, procedures, systems or strategies across the organisation as a result of this experience? Explain what.

19. What were the consequences of employing your intuition in your decision making? What effect did it have?

20. What if you didn’t use your intuition? What would you have done differently? What would have happened?

21. What learning did you get out of this experience?

**Final comments:**

22. Anything else of importance that you would like to add?

23. Anything that we didn’t talk about that appears relevant?
Appendix 6

Categorisation of ‘Intuitive Hits’ Thought Units

Intuitive Hit Case 1 p. 365
Intuitive Hit Case 2 p. 386
Intuitive Hit Case 3 p. 395
Intuitive Hit Case 1

1. INITIATING PROCESS

1.1 EXTERNAL DRIVERS

1. I think there was certainly an external element to that around changes that were going on with the local council, new ways of working around services coming together on police partnership and volunteering almost owning areas and then collocating potentially, and sharing their problems and working together as more of a collaborative team. [Participant C]

2. We needed to make sure that our lines of accountability were cogent and coterminous with the partners who are also charged with delivery of crime reduction. [Participant C]

3. In terms of the destructive nature of the environment that we created was also from external as well, but there were some issues that I would say were external and environmental. [Participant D]

4. What we saw was a change, a change in demand both internally and externally in the case that we needed to reengineer the way that we did business. We didn’t wake up one morning and say we’re going to do this. What we saw was the external influences that were impacting upon us. [Participant B]

5. Externally there is a drive from the government to deliver an effective and an efficient police service. There are a number of papers and government policies, there is a reducing bureaucracy paper... a national green paper that talks about delivering core standards to the policing, so a policing pledge and again this is about structuring our services, so that we can deliver pure customer service, according to that policing pledge. [Participant C]

6. Around that conversation the government changed its view on how the police would be assessed and the single top down indicator is about the public confidence alongside the local authority, how we’re dealing with local crime and antisocial behaviour. [Participant C]

7. I think some national changes around neighbourhood policing as well. [Participant C]

1.2 INTERNAL DRIVERS

8. The County [BCU] had changed to a certain structure and there was a desire within the organisation to, for us, emulate that structure as best we could taking into the account our local differences. [Participant A]

9. I think we knew we had to move towards the structure of the County BCU. [Participant A]
10. I think in 2008 David arrived in the BCU, the new BCU Commander, with John and myself, then there’s the Superintendents, and there was definitely an appetite by the three of us to restructure to get some more efficiencies, performance benefit, highest quality service, customer delivery service to the public. [Participant C]

11. I think certainly there were meetings with the wider management team and there was an event where they were asked to review for example are our existing structures fit for purpose and some of those questions that drew the answers out led again to us knowing that we couldn’t just sit where we were with the status quo, there needed to be a change. [Participant C]

12. Along the way in addition to emulating the structure within the County other critical decisions about how we apportion our resources where we put them, what the management structure looks like, and quite significant business change in terms of how we do our business. [Participant A]

13. We’ve got the budget, but it’s not as if we have to produce so many tins of beans with it, it’s all about the performance figures and the satisfaction at the end of the day. So there is our staff and everything we’ve got to play with as we want and what we’re looking for is improved performance. [Participant E]

14. A year ago a response officer would have turned up to go to work, and there wouldn’t have been enough people in my world, so they would have ended up with the prisoners themselves, and somebody from a neighbouring policing side would have moved across to the response team, and there was this merry-go-round, where everybody was doing somebody else’s instead of what they were trained in. [Participant E]

15. In terms of demand if you look at the crime figures, and then the number of calls, and then how we manage calls, and then how we manage the resulting prisoners etcetera, there have to be processes and people made accountable for making sure that their area of business was tip-top, and that probably wasn’t, well it wasn’t in place, and there was that blurring of roles. [Participant D]

16. Actually we could see the inefficiencies of how we were operating. [Participant A]

17. But when we put the staff in there to deliver that, there just were too many gaps in response, we weren’t getting out there, so yeah, it very much had to change. [Participant E]

18. We had times when staff workloads were extremely high, we had open control room incident logs, where we were due to be attending to take details of a particular incident or crime stacking up, beyond a manageable level. So therefore the impact on satisfaction and confidence with the public would have been affected, anxiety was high, sickness levels were high, and actually we didn’t have clear lines of accountability, so as a sort of rough kind of drive, back-drop to the change, and at the time performance delivery around crime reduction, detection and satisfaction were quite poor. [Participant C]
In January 2008 it really did strike me that there was this divide between response policing and neighbourhood policing. And in terms of my job performance I would say that the duty inspectors and the response teams didn’t really feel or display any sense of ownership of performance at all. [Participant A]

I think we all recognised the performance deficiencies and the leakage so I guess it almost became a fait d’accompli, we had to change. [Participant A]

It might have started as a bit of stalking horse but eventually it became a no brainer in the sense we couldn’t carry on the way we did. We weren’t managing the demand effectively as we ought to have been. [Participant A]

Based on the fixed numbers that we had, the difficulty was that the uniforms were supposedly supposed to be on the streets, but what we couldn’t stop is the demand in terms of thefts, assaults, burglaries, etcetera coming in, so those same individuals were then being called in investigating crimes, but then because of the volume of the neighbourhood work and the response work, and how they were being directed, it was a question that then those crimes weren’t being investigated, our detection rates were going down. [Participant D]

We were under an awful lot of scrutiny from the chief officer group, from the Police Authority around here, so that was a pressure environment in any case. [Participant D]

There was a lot of issues around performance from chief officer group. [Participant D]

The outcome was quite clear, what we needed to do, we all knew that based on those external drivers, and the need to be coterminous in delivery, and structured, so that we could deliver more effectively with our partners, we needed to mirror their structures, and we needed to make sure that the areas, the four areas now of [.....], were coterminous, but also had a sort of governance arrangement that ensured that we got the best out of everybody there. [Participant C]

We had the vision of what it would look like, what they’d deliver and what they’d do. [Participant E]

1.3 HIERARCHY

I think it may be worth noting that at the time all decisions were being made as well as the external one, internally from Headquarters. [Participant D]

We were prevented from moving on our own from chief officer group. [Participant D]

The time line sort of stopped, whilst we were going through the scoping bit, we weren’t able to progress it quite as quickly as we would have liked, because there were barriers that had been put up at the chief officer level. [Participant C]
30. We were very much tied into, we couldn’t make the decision ourselves because there needed to be an authority and go ahead from various internal senior officers and processes. So we couldn’t go with it as quickly as we’d like to. [Participant C]

31. We talked about it many times and we talked to people like [...] who was the Assistant Chief Constable at the time and there was a reluctance to allow anybody to do anything as, I’ll say, radical as that because it had been tried before. [Participant B]

32. The centre, Headquarters, chief officers, needed to be satisfied and reassured that what we were doing was going to meet the needs of [the County], not just [the Borough], so that took some time for it to work through. [Participant C]

33. Even at that point it was still reluctance and refusal from Headquarters to say you can’t do this because of the issues about number of resources, the critical masses that we will need in certain places etc etc. [Participant B]

34. Eventually the flood gates were opened and we were allowed to do it. [Participant A]

35. Eventually got to a point where the Deputy Chief Constable just said “go for it”. [Participant A]

1.4 UNCERTAINTY

36. I think part of it was there was a disparity between the HR computer function, say in the establishment of [POA], there was disparity between the real number, between the payroll number, the established number and the HR number, and nobody seemed to know the true answer between actually how many staff have we got. [Participant C]

37. The data which we had wasn’t joined up from the start, so what was incredibly frustrating was what our knowledge of what the numbers were, and what our belief was, and then what Headquarters were coming from. [Participant D]

38. So at the very beginning there were posts all over the place, and each of the Chief Inspectors thought they had a number of people under them, but they were double counting, so we needed to make sure that actually they had the right number to start with. [Participant H]

39. Going through a time when the police service doesn’t really know how to deliver what the government is asking it to deliver about confidence. [Participant C]

40. We’ve got to move forward, these officers have got to go somewhere, how do we do it. [Participant F]
1.5 COMPLEXITY

41. So it was quite a complex environment I would suggest. [Participant D]

42. There was a lot of business processes, it wasn’t just a simple question of just saying 20 there, 60 there, 50 there, it’s all fixed, it was actually reengineering the machine. [Participant D]

43. There was obviously an awful lot of other work around, as opposed to saying 20 there, 50 there and 60 there. It was about the work allocation, defining functionality as well. [Participant D]

44. I think it’s fair to say there is no magic formula in this. There is no logarithm you can apply to policing that says this, [....] town, you need to put X percent into uniform policing, X percent into neighbourhood policing, X percent into CID, X percent into back office support and through applying that distribution of resources success is guaranteed. That formula does not exist. So you then really do have to rely upon intuition and professional judgement. [Participant A]

45. What we don’t have is a demand programme in real depth to say at this time you should have this number of staff because the demand is at its highest. [Participant C]

46. The challenge for these guys was to try and get the right balance based on that performance indicator but also the knowledge that you can heavily resource the community policing to deliver confidence but then when there’s a major crime and you haven’t got the right resource confidence would be lost in a different way. So it’s a real balance. [Participant C]

47. There is all sorts of balance, all types of risks and different areas of accountability because obviously we all got different areas of accountability and you put that in to it and then you add to the financial risks, and the human resource risk in terms of communication, managing that change etc, etc, it was a very complex and intense period of our time I suppose. [Participant D]

48. If we put too many resources into the serious crime well the other stuff goes without, but if you don’t put enough and the serious offenders get away, and although there’s less offences there’s more of a high-profile impact. So three very different competing areas where we have to get the balance right. [Participant E]

49. So it’s that balance between the uniform world, outside, and picking up what needs to be doing, the preventative side, and stopping the crime happening in the first place and getting the balance right with the high volume that comes through and having enough people to deal with it and to monitor investigations through. [Participant E]
1.6 TIME PRESSURE

50. Actually the BCU was in such a position we had to change and we had to change quickly. [Participant A]

51. There was this sense of ‘mañana’, you know, we will just wait for them to do it tomorrow then, and the growing frustration on our part, or on my part. [Participant A]

52. Then when the green light came on the sort of pace of change picked up and we were told, yeah, you can crack on with it now, and actually we needed to deliver it by X, so there was a very, very short time frame. [Participant C]

2. INTUITING PROCESS

2.1 ANALYSING

53. So in terms of when you talk about intuition and science we were looking at it two years ago saying actually we think it could look like this and providing we structure the sectors in such a size that we could justify the level of resources that we will put into them, that they would then become self-sufficient in being able to exist, deliver and they’d have the resilience that they needed. [Participant B]

54. In 2008, the latter part of 2008 two of my departments had gone through an analysis with workforce modernisation, and that was an external team who came in, analysed demand numbers and looked at the workforce. That goal was primarily around looking at changing the workforce in terms of its make-up, whether it’s going to be warranted staff, police officers, or police staff, civilian staff, trained to a certain level. So a lot of the work certainly within the intelligence unit had already been complete, and that was a fait d’accompli in terms of the numbers and how that would actually look, and in terms of the reactive CID then again, in terms of general numbers, the demand profile, the amount of work that was required, and the levels of resource which was required was fairly wrapped up in that. [Participant D]

55. We then got into this analytical side as David said the various reports were done. If we would have written it down two years ago I don’t think it would have been significantly different to what we’ve ended up with. [Participant B]

56. You may recall we had a number of false starts. So recollection was Adam and Mark were supposed to go and visit other Forces and that happened to some degree. Sue was asked to write a paper outlining options and whilst it had a few ideas it didn’t really do us service and take us too much further forward. [Participant A]

57. We had brought in an external consultant with a view of finding the ‘Holy Grail’ in terms of what the resourcing formula looks like. [Participant A]
58. We also had a consultancy firm, [.....], who were commissioned to do a piece of work on the Force. It didn’t quite end up quite where it was supposed to go, to be kind. [Participant C]

59. [.....] were then commissioned by the Deputy Chief Constable, to come in, to try to rationalise those systems for the single version of the truth, I suppose, and then to, what we thought they were looking to then do was, having then validated what the proper established structure looked like and got all the systems talking to each other, was to then look at what’s the demand of policing across the organisation, and how can we allocate resource according to what we would have called the demand profile, so a demand curve. [Participant C]

60. So we expected them to do their consultancy, to provide a formula that could be applied to understanding your business, what are your business rules in terms of how you allocate, you now need to, based on this demand curve, consider reallocating resource and changing your structures, that’s what we expected. [Participant C]

61. We had an outside firm come in and say, okay, we’re being tasked to look at the Force, and find the resource formula, and find the magic button that’s going to tell everybody how the whole force should look, and that just collapsed and faded. [Participant D]

62. I think there’s also the consideration around the level of resourcing that David has talked about, and Tim has referred to the [external consultant’s] work, which was going to be the panacea. You know, how many people do you need in which area, that piece of work was never ever delivered. [Participant B]

2.2 SCANNING

63. David arrived then we’ve gone through a number of Force visits to various Command Units similarly positioned to [POA]. Again looking at models that they had. [Participant C]

64. We did themed visits up and down the country, looking at best practice, looking at how they’d structured themselves, and how they operated. [Participant C]

65. Inevitably there was going to be the point where we actually start looking what other Forces do around their neighbourhood policing teams, and realising that what we’re trying to achieve, no-one else was trying to achieve, well very few other forces were trying to achieve, and what we should be trying to achieve is actually a lower level of staffing in the neighbourhood policing teams. [Participant F]

2.3 PROFESSIONAL JUDGEMENT

66. When the [consultancy firm] came to us they were there just at the point of all these discussions and they were asking us, “So what are your business rules in terms of how you redistribute staff, and what is your rationale in terms of
deploying X and Y and how have you decided that you can take from there and add to here for instance” and I think that’s really where you see the intuitive management. There is no magic equation, there is no magic formula and it’s relying upon experience and the understanding, finger in the air, but perhaps more professional judgement of what’s needed to deliver policing in [.....]. [Participant C]

67. I think a lot of it was down to that, to the gut feeling at the end of the day in terms of that, and then I’d say professional judgement through one base or another, but it was also backed up in terms of professional judgement around supply and demand, etcetera, levels of staff and other things, so those things I suppose are, when you put them all together, there’s not a magic formula, it is about knowing that’s what I think, a lot of it was about that. [Participant D]

68. I think from the touchlines one of the really, really interesting things was Robert uniform police, Andrew reactive investigation and intelligence, Peter volume crime management and custody arriving at a model and a distribution of resources within that model in the absence of any real science that says you need to put so many people in there and so many people there. And I guess that’s where professional judgement, intuition and no secret the tensions of the merge in trying to come up with a model that is workable. [Participant A]

69. So I think again you take the snap-shot in time and you look at the resourcing you’ve got, you look at what the anticipated growth may be for the future and you come up with a plan for the best fit taking into account all those external considerations. [Participant B]

70. I don’t think, although I sit on the resource forum as I said, I don’t think that will ever come up with a definitive X percent should be here, Y percent should be there, because I don’t think that exists, so it’s always going to have to be that personal view. [Participant F]

71. I think as David said there is no formula, it was about looking at some data, so it wasn’t totally unscientific, but the reality was the data was basically looking at demand from logs, demand from crimes, so it wasn’t looking at every aspect because that formula is not there. And then ultimately it came down to, ok we have these areas here, business has areas, HR managers, etc, etc, and then ok how do we actually staff BCU to the processes and the structure we want and that’s where it became very, very difficult. [Participant D]

2.4 EXPERIENCE

72. Well how do you do that, well we’ve been doing the job, you know, that’s how many people you need for that, and all the science in the world, it actually wouldn’t put us far off. [Participant D]

73. I think it is based on intuition though, I mean we had [consultancy firm] come in and didn’t really tell us anything we didn’t know, and couldn’t take us any forward. [Participant E]
74. I think it is intuitive, but there's a lot about knowing your business. [Participant E]

75. In reality, we do know our business quite well, and can patch something, we might not get 100%, but it's certainly up around the 80%, and the difficulty we have is analysing that last 20% really. [Participant E]

76. I think there was intuition for the whole, it comes from something in the back of your mind, your experiences, and we've all got a certain amount of experience to stand up here. [Participant E]

77. So there are certain things where because of the level we operate at and the experience that we had, we actually look a lot more strategically at what the issue is rather than an officer at a grass roots level who is saying "this is a pain in the neck why have I got to do this" or conversely somebody saying "this is really good I'm really enjoying and we should do it". [Participant B]

78. We can sit around the packed table here in the morning and things that crop up we can think "yeah that one's going to bite us if we don't sort it out". And you can get some new member of staff come in or standing in for their inspector or sergeant or whatever, and they just don't seem to grasp the significance of what's happening so while we can go intuitively, "that one's going to bite us, and here's a list of things we need to put in around that to stop that happening", we can see the more inexperienced members coming in and sitting down and going "yeah got that, don't worry about it, it's alright..." It's not from experience. [Participant E]

79. They did it all on their own experiences, because they knew their teams, so they would know which personality or which person would have the right skills per any particular role. [Participant H]

80. A lot of the intuition side of things was perhaps who you were actually going to put in what positions because you knew that you were choosing to spread the expertise then you had to make some quite painful decisions as to where people actually went. And I think a lot of that was perhaps the gut feeling, knowing the individuals, knowing their strengths, perhaps knowing their weaknesses and then balancing those out to make the team as strong as we possibly could but recognising there will be weaknesses within that team as well but perhaps your intuition has a part in that and deciding where you place your resources at the end of the day. [Participant I]

81. The division up of where those officers went was based around I think, the needs in various areas, and I think that probably, where there was an awful lot of intuition rather than hard fact as to where these individuals should go. [Participant F]

82. Inevitably we are a product of our learning and our experiences through the police service, the routes we have taken to the position we're in now, and the
positions, the other various roles we’ve had will affect those opinions and things. [Participant F]

83. The gut feeling comes probably through our experience of previous models as well and what we see now is a variation on what’s been tried elsewhere, a variation of the model that we had in [POA] probably 5 years ago so we learned perhaps the errors of our ways it’s not a pure revolutionary gut feeling moment where we suddenly redesigned this. We perhaps learnt and adjusted previous models, best practice from elsewhere around the country and tried then to shape and mould that towards the current change politically and environmentally in [POA]. [Participant C]

2.5 GUT FEEL

84. I tend to go on gut feelings quite a lot, but the thing is that, really gut feeling, there’s a lot of numbers and stuff going through my head, it’s like you can’t work it all out, and you wake up in the middle of the night, and there it is, because your brain’s processed it all. So yeah, there is a lot of gut feeling, but a lot of that from previous experiences, and it’s like I say, knowing the business really, for where we’ve got to in the other little bits. [Participant E]

85. When you come down to basically what percentage of staff should be in what area of business, bearing in mind that the area of businesses all work together, and/or conflict each other in that sort of beautiful way, then there’s inevitably it’s going to have to come down to that person feels they need X, that person needs Y, that person feels they need Z, that means he get X-2, he gets Y-2 whatever it is, however it works, and that’s always got to happen. [Participant F]

86. The decisions we were making I think was an awful lot based on our intuition of what we feel is the right thing to do. [Participant F]

87. So an example would be the drugs team and the tasking team. Do we have a drugs problem, well that’s one of those areas where if you don’t police it and get loads of detections and arrests well it could be underground and nobody could be aware of it. So do we need a drugs team, well it was intuition telling us yes we did. [Participant E]

88. There are certain key areas of policing where the gut feeling says yeah we need to do something about this. Because it may well not be about hard statistics in terms of performance, but we are in the public safety business, and if young people are becoming involved in drugs and they go off the rails and that leads to an increasing in crime or it leads to a death, or it leads to dependency or it leads to all sorts of other things, those are the things that a lot of the public will not see, do not see unless they are unfortunate enough to become involved in that through a family member or friend or whatever. [Participant B]
3. INTERPRETING PROCESS

3.1 DIALOGUE

89. Tim and I within a matter of weeks and months of me arriving, you came here six months before me, we were talking and saying it’s not fit for purpose, it didn’t feel what we needed it to do. [Participant B]

90. David came along a year after me and Tim and I were talking about it and then various conversations took place about what it would look like. [Participant B]

91. Certainly the Chief Inspectors and the Superintendents got together in a smoke-filled room and came up with a view of the world. [Participant A]

92. And I think that that perception was born out the longer I stayed and the more we spoke, which is why to some degree, to a large degree, we said we’d deal with the way the Chief Inspector neighbourhood policing and the Chief Inspector uniform operations would come under one role to provide them with the same line management so – perception, intuition call it what you will – it’s certainly where I was. [Participant A]

93. So there’s all this debate that was going on about what should happen and what other departments we felt should be doing. [Participant D]

94. Where should we best be using that pool of officers, bearing in mind that they are all carrying a workload, they’re all doing some work, now I think that was the discussion about what we should do with them, now inevitably that work that they’re doing has to go somewhere. [Participant F]

95. Where we had the debate around the section would be my sort of proactive section, which is the crime targeting team, and then formulating a drugs team, which in fact was new staff, that was probably where we got into more discussions around what was intuitive, what did it feel like, in terms of where we were, and how we could actually develop that. [Participant D]

96. So you have all these collective discussions and then ultimately it came down in terms of what’s right for the BCU in the whole, and we had to make something fit to be direct. [Participant D]

3.2 RATIONALISING

97. Now the easiest way logically to get confidence is to put uniforms on the street, I argue, the other side of the argument, which I’m sure Andrew and some ways Peter would have is, if we had the information that every single crime that was reported to us there was a detective who caught every baddie and brought to justice, that would give confidence. Unfortunately a lot of the detective end of the business isn’t necessarily as visible as the uniform end is, so there’s that, and what will always be slightly conflicting, my view is put uniforms out on the street
and you should reduce the crime. That means you have less to detect. [Participant F]

98. It’s actually that balance around why do you do it, why do you do it in the way you do it, what are the issues and the potential risks if you don’t do it, are there other issues in terms of public safety, are there issues about organisational reputation, personal reputation, or there are some issues about personal liability, ultimately, and they are all things that I’d suggest are considered in some way shape or form, to some level or degree, in arriving those decisions. [Participant B]

4. INTEGRATING PROCESS

4.1 GENERATING OPTIONS

99. We had Edward and Matthew, principally, an Inspector and a Sergeant who were tasked to go away and look at options which were then presented to this group. [Participant A]

100. I think we gave him the concept, and we left him to then continue to design options, present those options, and then work through the change management. [Participant C]

101. They took that on and developed and built on it and put a bit of science behind reasons for or against and come up with different options without crunching through the numbers. [Participant E]

102. I guess my recollection of the process would be that Matthew and Edward came up with some options. Tim and John and the managers kicked those around and I guess had some interesting discussions around what the numbers looked like in terms of how many bodies go into different parts of the business. [Participant A]

4.2 NEGOTIATING

103. We did a lot of horse-trading as it were between each other, I’ll have so-and-so, and need somebody with this skill set, where can I get them? Your skills, how good an investigator are you? Do you want to go and be a detective, are you going to make it realistically, no you’re not, well... [Participant E]

104. Because each of us had different demands, and it was just trying to reconcile those different demands, not just based on say numbers and input in terms of demand, and then okay, so that means you need that amount of people, because we’re going to cover this many shifts, and this many hours. [Participant D]

105. There was no formula, so therefore, intuitively, people should be carrying ten crimes, but what crimes are they, etc, etc. [Participant D]
106. I think what we actually did was sit down, well you and your five shifts covering it, "how in the start did you come up with your number", I went "well, realistically to manage the work that I’ve got, realistically this is what I need", and Robert was "well, move all those extra people off the beat teams, and what does he need", so we came up with those numbers. [Participant E]

107. I think a lot of it is down to our gut instinct. It was the three of us hammering it through the process with Edward and Matthew but in reality we sat down between the three of us and hammered out, this is what we think, going on our gut instinct and where we thought where we needed to be. [Participant E]

108. A lot of the time they can just come and say, “no, I need 10, why do you need 10? I don’t know”, there’s no real, nothing really behind it so they need to come up with a proper case as to what they were going to use their 10 for, and why it would be better placed with them, as opposed to somebody else. [Participant H]

4.3 CONFLICT

109. We came at it from different angles we have different understanding of our own business areas, quite distinct business areas. Robert is a uniform police, there is a response, deal with what’s in front of you and move on, emergency response more or less, and that initial service. Andrew next to you got the serious crime intelligence so if something serious happens make sure there is enough resources in there to deal with that and get serious offenders through to court. I’ve got the more station-based processes whereby people coming through custody about 100-150 a week and they’ve got to go through there officially high-risk area, reported crime and the people pick up and do the volume interviews. [Participant E]

110. We have to work within parameters, and none of us wanted those parameters, we didn’t agree with it, none of us. [Participant E]

111. It was just, and it’s we had to, we don’t like that structure, we don’t want to go with it, we want to go with this, and got so far down the line it was “no you’re not quite autocratic, we want four, and that’s what you’re doing”. [Participant E]

112. Robert wasn’t convinced, didn’t agree with the principle that the neighbourhood policing should reduce, and in reality I didn’t either, I’m not sure if you did. [Participant E]

113. So from my perspective, do I want to lose the uniform cops on the street, no I don’t, I don’t think you can, to this day. [Participant F]

114. What held us down was actually getting to a core of where we were and then really sort of building on that, and then thrashing it out, it was like this idea, this idea, so it’s still very much up in the air until the last minute, and then of course it was all changed altogether. [Participant D]
115. We tried to do this on a meetings, on a weekly basis, to try and resolve it, because of that things changed, rumour and speculation and information was getting out along the division, so that was actually causing concern. As a result of that we thought we had agreement on one week, and next week new ideas came in which altered it to quite a large degree, or at least put us back to a decision or an argument which we’d had to, to go there. [Participant D]

116. I think it was an incredibly destructive process for us to go through, in the way that we went through it, because it, it, we had some very long meetings, which were confrontational meetings between the three of us, and led to, inevitably, well saying “okay, one’s got the bare minimum, right, you’ve got to lose more”, and so inevitably that will push people into their position of, “okay, well I’m not my bare minimum, I’m not giving up anyone”. [Participant F]

117. So there is a lot of professional judgement going on around the discussions that did draw out the tension. [Participant C]

118. There are different views on the drugs team around the table. That’s probably one of those teams that are more on intuition than anything else. [Participant E]

119. I think we all agreed there was a need to change it was just what that change looked like. That’s where the tensions were. [Participant A]

120. It was challenging to get to a place where we felt we could all agree. [Participant A]

4.4 CONSENSUS

121. It was agreed what level of staff we felt were required in the areas to deliver properly. [Participant C]

122. I think colloquially from the consultation point of view it was raised and discussed at a number of different forums, different management teams. And on the whole I think the end product received really good support. [Participant H]

123. We went to the operational board, which is the meeting with all operational Inspectors I think they were sold the idea. [Participant F]

124. On the whole I think that the willing voices were heard around the table and there was a real want for the change. [Participant H]

125. When we got to an answer that there was consensus on, I presented it to the Deputy Chief Constable, who gave it the nod and we got on with it. [Participant A]

4.5 TEAM DEVELOPING

126. From the rest of SMT, it’s built us as a stronger team because we have worked through a real challenge together. [Participant H]
127. I guess apart from making a business decision, I think we grew as a team as well, as part of that journey. [Participant A]

128. Some of those things that it’s brought across identified weaknesses in areas, weaknesses in teams, which we’ve had to turn to build upon, a lot of difficulties as we discussed certainly with us as a team as well, in terms of how we do business. [Participant D]

4.6 COMMUNICATING

129. So we knew that probably the end game was always going to be to mirror our partner’s structure, but it was more around getting to that point, and taking staff with us along the way, and communicating that effectively as such. [Participant C]

130. So there’s lots of then scoping, consultation, communication to staff, stakeholder meetings, updates, focus groups, briefings to staff, as I say engagement and consultation and all those sort of change management principles, that were governed then through a meeting that I hold, and also our Senior Management Team meeting, we sort of pulled that together ready to deliver it for this year. [Participant C]

131. Through a variety of forums they did staff briefings, they circulated things electronically, they spoke with individual managers as well, and then engaged with individuals, but it seems that that didn’t work, it wasn’t quite enough, so it might have been that it was pitched at the wrong level. [Participant H]

132. There were also other communication methods, we did some road shows with the BCU Commander, so David will have delivered a couple of road shows explaining what it was, and there were briefings at various meetings, so through the meeting structure, there would be a management meeting, which would catch all of the Inspectors and the police staff equivalent, there’s development days, Sergeant Development Days for Sergeants and their police staff equivalents, so it was quite heavily done, but it still wasn’t enough. [Participant H]

133. The other aspect of it was of course because, and this was after posting people into the areas, where they wouldn’t necessarily have wanted to go, was the disquiet about being posted there, so there were a lot, there were some unhappy people about where they’d been placed, and it was only because it wasn’t explained to them properly. [Participant H]

134. It became apparent that some of the other methods of communication needed to go around those blocks because the individuals themselves weren’t helping us. [Participant F]

135. The thing with that is there will never be enough communication, and we know that in helping manage change and to accommodate that, communication is absolutely vital. And I know that as a management team, and indeed as an
individual, we don’t do enough communication. I think the other part of me
would also say though that you will never please everyone. [Participant A]

136. I would accept that the consultation process was not as fulsome as it might
have been, there are weaknesses in that, actually there are some strengths in that
as well, because actually, we have a responsibility to exercise some leadership,
and I can remember in the early days, when people heard about change, a number
of hares were set running and quite clearly we could have excited false
expectation around what the new world will look like, and that could be equally
challenging to manage in terms of disappointment if people don’t get what they
want. [Participant A]

4.7 INVOLVEMENT

137. There were opportunities, and actually a lot of the opportunities weren’t taken
up, and staff didn’t necessarily engage in, we set up a consultation meeting, we
set up a focus group, staff didn’t necessarily come voluntarily, when they did
come, they just didn’t seem to engage, and you can, I suppose if David was here,
he’d say, “you can take a horse to water, but you can’t make it drink” and I
suppose that would be the analogy really of what we did. [Participant C]

138. I think there’s always a problem with trying to engage people and one of the
things that came out very early on sort of immediately after the changes took
place, people said well I didn’t know this, and I didn’t know that, and I didn’t
know the other. But when you go back through the root of communication,
clearly you did. Whether you chose to listen, whether you chose to be involved is
another thing altogether. [Participant F]

139. There were individuals in that group who weren’t necessarily as committed to
it or signed up to it as others and the end result is people they line managed were
less well informed about the process of how it was going to work. So inevitably
whether it was doubt or whether it was blockages in the process, but there were
definite blockages in the process, that didn’t assist and help us put the change in
place which meant there were some people at the grass roots level that didn’t
actually understand why it was all happening. [Participant F]

140. Obviously there were few that probably, necessarily, wouldn’t want the
change no matter what was put in front of them. [Participant H]

141. As part of that process we’ve been out rallying, banging drums and
persuading people to participate, so my view would be, if we just left it to people
to just take up yes or no, then I would suspect as John says, we’d probably
struggle to get to 50%. [Participant A]

142. I think for me there’s also something about knowing the organisation, and
whilst this may be controversial, the workforce will say they want to be
consulted, they want to be involved in the re-engineering, you know in designing
the outcome, we all know from past experience that if you look to consult a
hundred of them you maybe get 30% who’ll come back. [Participant B]
143. Because we all know, we could consult everybody within this BCU and we wouldn’t get back, we’d be lucky to get 50% of people respond and as I say you’ll always get those people who will be negative. [Participant B]

144. This was my dilemma with us banging the drum and rounding people up. The dilemma is do you force the people who really don’t want to have a comment, because they’re negative to place a negative comment, or do you actually encourage those who couldn’t be bothered who might actually be positive and I think that you’re more likely, again my gut feeling, is that you’re more likely to drag those that didn’t really want to get involved into it so therefore there may be a negative mindset when they fill out that survey. So actually we may well have shot ourselves in the foot. [Participant C]

145. We run focus groups and it will very much depend on the individuals or mix of individuals who you get in the room. So you can get the mad, the bad, and the sad who will just come in and throw stones, or you can get others who are more considered in terms of how they respond and react to the change. [Participant A]

146. You’ll always get, when you look at it, that cohort of people who want to be involved and want to drive in assisting that change, at the other end of the spectrum you’ll get those people who will criticise and complain and moan no matter what you actually do but they’ll never actually contribute to the process and then you’ve got a huge swathe in the middle. [Participant B]

5. INSTITUTIONALISING PROCESS

5.1 SYSTEMATISING

147. We couldn’t have just put numbers in place, it was also about re-engineering, making sure that there was consistent processes throughout, to make sure that we’re then able to achieve success. [Participant D]

148. I think probably the most important thing we did was actually trying to give clarity around what the role was, and put those processes in place. [Participant D]

149. My view overall is that it’s been a success for the BCU, actually our business processes are standard now, they’re a lot more efficient, we actually can talk about posts and people confidently now. [Participant D]

150. I think it’s also been a success in that moving really to defining roles per accountability from Senior Management down in terms of what the roles are, so I think there’s been a number of successes. [Participant D]

151. Neighbourhood policing teams now will consist of a beat manager, who’s a police officer, and one or more PCSOs, that Neighbourhood Policing Team is a common, that structure is common throughout the majority of the Police Forces. [Participant F]
152. By actually putting the neighbourhood policing team, making it smaller, but defining very tightly in terms of what the role of those officers were, and knowing what the functions were, it actually enabled us, it's helped moving that to deliver on what the Neighbourhood Policing Teams classically should define. [Participant D]

153. Now we've gone through that pain, we've agreed and come to, and ratified ideas about what works through that, and what we need to do to make this consistent, because what we can't do, is get to a position whereby if we do need to make a significant change in the future is then start again, because a lot of the pressures and a lot of the issues was actually not having standard practices from the start. [Participant D]

154. I suppose the main role for them was changing the boundaries between what was neighbourhood policing and then response policing. And they were at poles apart, and actually redesigning the operational sort of uniform policing side of the business so that they became geographically aligned teams, working with a clear line of accountability to their Police Inspector, their Sector Commander, so that was probably their biggest role, of changing that, redesigning the role profiles of the individuals working for those teams, making sure it was aligned to partner structures. [Participant C]

155. The Neighbourhood Policing Teams we agreed to adopt the same model as in the County BCU which was that each Neighbourhood Policing Team has one community beat manager who was a Constable and then one or more Police Community Support Officers who are civilians according to the profile of that beat. [Participant A]

156. We reduced the numbers on the Neighbourhood Policing Teams because some beats had a community beat manager and then one or more community beat officers as well. We stripped out community beat officers and put them either into response or into the local crime team or crime management unit. [Participant A]

157. What this caused us to do was really try and nail down and define what work was going to be done in different departments, and so what we'd done in terms of the Neighbourhood Policing Teams originally, had asked them to do two or three different functions within their core all, so it was actually just a massaging of figures. [Participant D]

158. From my point of view the success is that we now have an establishment of our staffing, fully signed off, and we know exactly where everybody is, so that was the thing that was missing in the very beginning, and now we've got it. [Participant H]

159. Having gone through the change... we've got the lowest crime allocation to staff that we've had generally at any point, we've got an effective crime management system that sort of weeds out crime, it also gives people scheduled appointments to come in and see us. [Participant C]
5.2 ADJUSTING

160. Again there will be minor adjustments as things go, as people move to and from, we’ve got to keep on top of that, it’s a constant process. [Participant D]

161. New demands come in, new analysis, new issues arise, so for instance, in Peter’s world we’ve got to re-adjust and lose some capacity which we had in some proactive teams to support the custody, and just supply in a 24 hour basis support to the rest of the BCU wasn’t possible under the regime, so there has been some refinement, around that. [Participant D]

162. Peter came forward with some inbuilt issues which we put in place because certain staff were in Peter’s world so we had to reconsider some issues and some decisions and then we spread the load collectively by posting people in different places. So it wasn’t just one decision it was a continuous issue. [Participant D]

163. But if suddenly things were to change, you know current financial climate nationally and internationally, if the Police Authority for example were to say “we are going to reduce the number of police officers”, I don’t think they will, but if they did, then again we would need to revisit that model because it’s based on four sectors, and there is a big issue about capacity, resilience and self-sufficiency. Those are the sort of key considerations. [Participant B]

POST-DECISION PROCESSES

1. REFLECTING

164. I think we knew what the answers were before consultation. So the criticism, if you were going to look back would be, yeah, we communicated, we tried to consult, some might say we always knew what the answer was, so therefore it was a pointless exercise. [Participant C]

165. There’s also not the engagement and the consultation necessarily to the right level of staff. I think we did consult we had a number of layers and number of meetings but did we consult over what the outcome was going to look like? Or did we consult to communicate the change? I think we probably did the latter. [Participant C]

166. I think this is where it comes back to this question about consultation, do you consult with a view to building a model or do you consult as part of the communication strategy to implement the change? [Participant B]

167. I think it’s quite clear that we didn’t really consult in the way that staff would have liked. Now you never, you won’t always please everybody. [Participant C]

168. So I’m sure that with reflection it could have been managed better in terms of the consultation, but don’t confuse this organisation with a democracy, because it’s not. [Participant A]
169. We can look back in hindsight and say were we consulted sufficiently, did we have enough say about what that locality would look like, what the area would look like, the size of it, what neighbourhoods, what beats, it covered? I don’t think we did. We didn’t have that insight. [Participant C]

170. So to an extent I think we may have come up with a slightly different map that would have perhaps mirrored our policing needs greater. So our gut feeling wasn’t taken care of there, we had to go with the map as it was drawn. [Participant C]

171. I think there’s elements of it now that were taken out of our control. For instance the locations and the sectors we have had to come online with mirroring and supporting external structures that have already been put in place. [Participant C]

172. If we could go right back to the beginning of the whole thing I would challenge some of the parameters we had set for us at the beginning. Because you’ve got to start something on your shift paper, when you start any form of restructure, and I would have liked to have challenged that. [Participant F]

173. And I think there’s almost an element, and I would have loved the situation where we had an arbitrator who said, Andrew, right, what do you want, why do you want it, Peter what do you want, why do you want, Robert, what do you want why do you want it. Right the answer is, Andrew you’re getting this, Peter you’re getting that, Robert you’re getting that, get out sort it out, and I feel we passed the point that we really needed that. [Participant F]

174. I think it would have been good to have moved faster, I don’t think we moved fast enough, we talked too much, and had too many fragmented meetings, and it would have been just nice to have got to where we got to faster, I think, it was too long. [Participant H]

175. I think the lack of data that we had available to us made it difficult, because there was the discussions around how many posts there actually were, and because, with any degree of certainty, as a force, we couldn’t say for sure this is what you’ve got, because it had been muddied over so many years of people saying they had what they didn’t have, that slowed it down. [Participant H]

176. It would have been nice to have really put a team into just getting that data first, in order to inform the decision making in there, which would have speeded it up ultimately. [Participant H]

2. LEARNING

177. So having now gone through the change, yeah we’ve got some lessons to learn. [Participant C]

178. When it came in the 1st of July we were still working through the work and the allocation process, and other processes which then have hindered the actual
change programme itself. So for me it would have been do that earlier on, write the time off, and get it complete, and don’t come out this room until it’s finished. [Participant D]

179. So for me, two things, get clarity in terms of reference to start, and secondly write time off, get away and deal with it, as opposed to just doing it every week, and then allowing those other things to fester or whatever. [Participant D]

180. In my mind it would have been far better to say right, a week, next Monday, we’re all going off, even if it’s to another police station, sit down, work it out, we come up with a model, we get 80% of the way there, and then the arbitrator or line manager comes in and says okay what’s the 20% you can’t agree on, what are the reasons why you can’t agree, fine, fantastic, I will go and sort the 20%, and I will tell you what’s going to happen. [Participant F]

181. If I had the opportunity of changing things now I would take them, and I would do it differently, but we don’t have that opportunity now. I’d restructure the whole of this unit, but not in the way we did it here and now, it wasn’t on the agenda then, and it wouldn’t be on the agenda now, and I wouldn’t have based it round four sectors, but that’s how we have, we’ve had to do that better around [.....] Borough Council, so that again there’s external things that are requiring us to do this. Inevitably you start saying right we’ll have a restructure, you don’t start with a clear blank bit of paper do you, you start with parameters around it, and some of those parameters I’d probably have challenged, if I knew that now, where we are now, I’d probably have challenged some of those parameters a bit more at the time, where we are, the benefits we can see, yes there are some benefits, there are some big drawbacks. [Participant F]

182. The learning is consultation should mean consultation, it shouldn’t mean communication, and if true consultation is about understanding people’s needs and taking a view from that to help steer your options, then that’s what it should be, and therefore there should be a lot of effort placed in providing the right opportunity, the right environment, the right understanding of staff to engage in that. [Participant C]

183. That consultation didn’t necessarily happen in the right way, it’s one of the lessons that’s been learned from the review, is that earlier engagement might have been better to give people the opportunity to put forward their, or submit their case for wanting it. [Participant H]

184. Remembering and capturing what’s happened from this one, because so many times it’s probably been done before, within the organisation, but it’s that sharing of those lessons learned that we don’t do very well, so we could see another department go through exactly the same thing, and it’s not until afterwards, and we say, oh yes, well we had exactly that, but it’s too late then, so sharing it earlier. [Participant H]

185. I think the communication, one aspect of it, although I’m not sure exactly what else we could do, but there’s something has to change, earlier HR engagement. [Participant H]
Intuitive Hit Case 2

1. INITIATING PROCESS

1.1 INTERNAL DRIVERS

1. An email comes out without any, I wasn't aware of any sort of chain of command actually making that decision... but an email went out to well over a hundred people including partner agencies to invite them to an event at the [.....] Hotel, quite a prestigious event and venue in the [.....] town centre, on the 2nd November, for this event, in the hope to see people there. [Participant N]

2. Richard picked up an email from the police planner, a middle-ranking middle manager, who was inviting everybody to a £14-16 a head celebration of the successful police operation, that money not being collected from each individual attendee, but incorporated in our overall budget. [Participant L]

3. I mean, on the receiving end of that, as I was, if you follow the chronology, Richard receives an email, because he was one of the people heavily involved in the operation, and therefore effectively he was on a guest list of people coming along to this event. [Participant L]

1.2 TIME PRESSURE

4. I think timeliness is another key element, and I must go quote that downstairs, the timeliness thing, so there had to be a decision, I agree this was the right one, but no decision would have been worse. To left it kind of floating would have been worse, so timeliness was really important. [Participant O]

5. I think it's a message for me, back to me, if you like, to remember what probably is important, and timing is critical here, I think. [Participant L]

6. And so the only question marks about that become the need to make a quick decision, because something like that you can’t just hang around for a week and decide what to do. [Participant Q]

2. INTUITING PROCESS

2.1 ANALYSING

7. So I checked up with the person who’d sent the email in the initial place, to get some more detail. [Participant N]

8. So as a result of that I checked with the person who sent the email out to find out what was the background. [Participant N]
9. So I just did a little bit of checking and questioning around is this a standard, is this the kind of thing that normally happens, is this part of our kind of reward structure, if you like, for these type of events, just to kind of double-check it out. [Participant Q]

10. Exactly yeah, quite yeah, let's go and do loads of research about what other police forces do at the end of conferences! [Participant Q]

11. The only kind of questions for me was then trying to unpick is this a normal practice? [Participant Q]

2.2 EXPERIENCE

12. My presumption would be that a more junior person in our operation who thought this was a good idea, and it's a nice idea, but it's not a very good idea, would be my view, but he's probably thinking, speaking on his behalf, I want to recognise the good work that my people have done, and this is a way of saying thank you, which is quite a nice motivation, but naïve I think we'd say, won't we? [Participant L]

13. But in some ways it was a fairly easy, instinctive one, probably coming, I think, from my role really. [Participant Q]

14. I think we do know from that experience condensed into a few minutes conversation, that this decision, that event would have been played out time and time again over the next x months, or years. [Participant L]

15. I think, another factor is probably the experience of some of the people involved in that chain of decision and discussion. [Participant L]

16. Because, actually, I haven't got a lot of experience around the police at [POB], so instinctively it would have been from my background an absolute no, we shouldn't do this kind of thing. [Participant Q]

2.3 GUT FEEL

17. ...which Richard, intuitively, felt was poor use of public funds, particularly in the context of recession and the economic challenges that we're facing. [Participant L]

18. A number of people subsequently have expressed the concern that it didn't feel right to them. [Participant N]

19. So an email came out, I was a recipient of the email, and for me the event just didn't sound right. [Participant N]

20. Six months ago, a year ago, I wouldn't have felt the same way, so my intuition would have been different at that point in time, whereas today it doesn't feel right. [Participant N]
21. It came out as stress, is what he means. [Participant L]

2.4 CERTITUDE

22. I think I was confident we were making the right decision, for all the reasons we’ve touched on. [Participant L]

23. I have no doubts about it at all, it was exactly the right thing to do. [Participant N]

24. Further I understood it was right to make, and certainly I didn’t go home thinking I have made the right decision. [Participant N]

25. Like Richard I was very confident it was the right thing to do, I did think it was a shame, and that’s, I think all the logic, all the responsibilities that go with the office and the public service, the public sector element to our job, I think, confirm in my mind that it was the right decision. [Participant L]

2.5 SUBJECTIVE

26. Well I can see, I can still see it on an individual basis, but I think when you’ve got a group in together, when you’ve got over 10 years experience then that’s where the rub comes in, because we’re all coming from our own individual sort of viewpoint. [Participant N]

2.6 SPEED

27. My immediate reaction and it was intuitive, was to say, and I don’t think I do this very often, but within two minutes of getting the information from Richard, I said “this can’t happen”. [Participant L]

28. I think it saved a lot of time, didn’t it, because we didn’t spend a lot of time saying, right okay, let’s start working out the cost of benefits, it was actually just, it was speed wasn’t it? [Participant Q]

3. INTERPRETING PROCESS

3.1 RATIONALISING

29. Where I was coming from initially is that I’m looking out from this, and saying what is the view from outside, in terms of, if you speak to government, so I think in terms of the policing context we’re operating in, we’re very much considering that, that outside view, which probably not many organisations would always look at that view, they’re not going to be internally focussed, but our decisions are looking at what’s the impact going to be, particularly in, what they say a single top down target of public confidence and improved public confidence, so for me that was the big look and actually those considerations. [Participant N]
30. I suppose my thoughts were clear, it was going to be chaos, because I couldn’t see it running with offering it out to them so somebody has to pay. [Participant N]

31. From my point of view, and it’s probably partly round the kind of role and the way I might approach this, is that if either the Chief or Richard had come to me, and my instinct probably would have been kind of no on it, and almost what reason would we have for doing it, you know, and actually what, what are benefits, and partly that’s, I suppose, it’s a little bit around my kind of role. [Participant Q]

32. I think I heard Duncan say something about as you’re kind of holding the purse strings, and being sure and being really happy about everything you’re spending in the right way. So I kind of immediately had a natural reaction around why would we want to do this? [Participant Q]

33. I think there’s also quite an interesting contrast around logical, what I’d call logical and emotional aspects to it, because there’s a logical one which is this is going to cost us £2000, which actually is evidently affordable in the grand scheme of the budget, not an awful lot of money, or anything else like that, but an emotional one of public perception tied in with the Hotel where we’d been, had bad press the year before, and so it’s the balance between both emotional and logical decision making factors that come to play, and sometimes some come to the fore, and other times others do. [Participant M]

34. I think if you go back to the public and try and give a logical explanation, to say this was only £2000, in a huge budget, it just doesn’t carry with them at all, because, to us, as individuals £2000 is a huge amount of money, and it’s difficult to differentiate what £2000 means to us as an individual and what £2000 means in a £250 million budget. [Participant M]

35. For the sake of a very, very small part of the budget we’ve, well why don’t we thank people, as James said it would have cost something to do an in-house catered event that you went on Friday, it would have cost something to produce and frame certificates to hand over to staff on this other event that we’ve talked about. It would have probably cost a couple of thousand in an overall budget with all that goes with it, an opportunity to thank the staff, well we do do that, and it does cost some money, and therefore just occasionally to do it in the environment of the conference itself, which included the [hotel], to have an opportunity to thank, not just our own staff, but partners, and to engage with them in a relaxed environment all sounds quite a nice thing to do. It’s just a shame I think that it’s absolute that, that we can’t do it. [Participant L]

36. An apology, but obviously the rationale behind it is that with all those issues that speak about public sector financing, knowing full well that as soon as that email goes out, is that we are not water tight as an organisation, but that could thinking be in the local media, so we’ve got to balance those consequences up really from it. [Participant N]
4. INTEGRATING PROCESS

4.1 CONSULTING

37. I immediately spoke to the Chief, and then we involved Brian in the decision making process, so that’s how it worked. [Participant N]

38. And so talked about well what happens next, what other options have we got, talked with the Chief and we brought Brian in. [Participant N]

39. However, I thought well we do have a Director of Finance here, who informally I consider to have almost the conscious of the organisation as part of Brian’s portfolio. I think we all should have that, but when it’s issues of money, and arguably, if you like, and this is over-simplifying Brian’s role, apologies for that Brian, but he holds the purse strings to a certain extent, so therefore I thought that was, and he was here, so it was obvious I thought to get a very quick third opinion, that’s what it was. [Participant L]

40. [Richard] brought it to my attention, I brought in the Finance Director as well to get, there’s a whole indicator, two levels of a view, what’s his sort of conscious tell him financially, and I think between the three of us, intuitively, in quick time, we said “this can’t happen”. [Participant L]

4.2 VALIDATING

41. Effectively Richard presented to me the issue in a, I think, correct, judgemental way, I mean you’d got a judgement in your mind. And I think I would say Richard was coming to me to confirm, endorse, rubber-stamp that decision, but I suppose I’d got an option, I could have said no I think it’s alright, let it happen. [Participant L]

42. Potentially Richard’s looked at it and thought this doesn’t look right, gone to the Chief with his expert intuition after 10 years, saying you’re right, it doesn’t look right, and this is where we’re going to go with it. So you’ve got an inkling of intuition coming through there, with a confirmation at this level. [Participant M]

43. Physically what we did is Richard got this email up on a big screen in his office, so I almost took Brian by the hand, we walked downstairs into Richard’s office, and physically looked at this message, and then looked at each other, and said, “no, this can’t happen”. [Participant L]

44. So I didn’t need a lot of persuading and that because it was almost presented to me as we’re not very sure about this, our instinct is not to do it, and almost just really kind of asking me for that kind of further judgement confirmation, which in some ways was quite easy. [Participant Q]
4.3 INVOLVEMENT

45. I think it could have involved the whole group here if it had happened on, just before COMs, in fact if we went into the chief officers meetings, which is our weekly meeting. But it was sufficient that I saw that, it didn’t need anybody else to actually be involved in that decision making in the end, really. [Participant N]

4.4 CONSENSUS

46. We took a view, again round this table, in very quick time, that actually, even though we could justify every penny, we didn’t want the publicity, and didn’t want to be seen to be criticised last week, as it was a few months ago, and then almost ignore that criticism and still blandly, blithely go on ahead and have our own little conference spending, what is perceived to be tax payers money on having a nice time. [Participant L]

47. So we made a decision that it wouldn’t happen in the format that had been described. [Participant L]

48. I think the decision was absolutely right, but there are other ways of saying thank you. [Participant P]

49. So even though, and I’m completely in agreement that was the right decision in the right context. [Participant P]

4.5 GENERATING OPTIONS

50. I think we were back to that individual, and said we’ll work up some options, so came back with the options, about five or six, and the best one, at that time, and I still support that is cancel the event. [Participant N]

51. So, I’m not sure if it was partly to try and help him save face, because he’d sent this message out, and also with a little bit of mischief in my mind, I think, I thought well if people want to still go to this event, let it happen, they can pay, out of their own pocket privately, knowing full well that that wouldn’t promote or create an event at the end of it all. [Participant L]

52. I’d obviously done some work through those options and sent, so it then come back no, and in fact it came back from the original decision maker, that having thought through all of that it’s probably best to cancel it completely. And so it’s almost passing that decision back. [Participant N]

53. I mean we considered, one, that they pay, the attendees pay themselves, two, that we actually go to a venue in [...] and just have a drink together, but then when we talked around, do you do that, could we do that in terms of the mix of people who’d be coming together, and so we, and another one which was even dodgier, I think, was to pass, pass it back to Group 4 Security, which is a private company, and ask them to pay. [Participant N]
4.6 REPUTATION

54. I seem to remember saying to Richard, because the irony for all of this is, it’s an extraordinary trivial event in the context of one a half million people who live in [.....], and who have policing services 24 hours a day, 365 days a year, and which we fund through the different government and other grants, local and national, with a £260 million plus budget, and yet you’ve got three senior people here talking about what Richard said something that was going to cost, if pounds and pence of it was the only measure, £2000, an absolute drop in the ocean, but we’re talking about it, and we made those decisions, because I think we thought it wasn’t just a financial costing discussion we were having, it was all about reputation, the management, the efficient management, the responsible management of the force, of the organisation. [Participant L]

55. But I think his feelings would have been even worse if, and I’m imagining how he may have felt, I don’t know, his feelings would have been even worse if the public perception of the success of that big policing operation would have been dented almost damaged irreparably, if we’d gone ahead with this sort of event. It would then have rebounded and eked into, slipped into lots of other things. [Participant L]

56. ... and then with the kind of damage limitation on it, so what, having safely kind of made this decision not to do it, and actually then at the same time then create lots of bad feeling and adverse publicity etcetera. [Participant Q]

57. Yeah, and one bit I just had in terms of the publicity is that, in my thinking was, if it goes ahead there will be bad publicity, I was confident, if it doesn’t go ahead, and if we are seen to cancel it, but there was some bad publicity that could follow as a consequence to that, internally we may have a few staff who would feel undervalued. [Participant L]

58. I could anticipate foresee some newspaper articles saying that we were petty, or didn’t reward our staff, or even how dreadful that it got so close to happening, before somebody put a stop to it. [Participant L]

4.7 VALUES

59. I was going to say because we went through that Serving [.....], didn’t we, and that output put us doing the right thing for the right reasons, it’s actually part of the heart of how we’re trying to do business, so regardless of that, it’s the, doing the right thing that matters at the end of the day. [Participant O]

60. It’s probably interesting though to mention the culture of the organisation though and what does saying ‘thank you’ mean. [Participant M]

61. I think consistency is really important as well, so bringing it back to the values of the organisation, and the way we do business, so that we can always hang things on values, somewhere, whatever it is you can unpick it down to that, and do the
right thing for the right reasons, so consistency would be an important part for me. [Participant O]

POST-DECISION PROCESSES

1. REFLECTING

62. But I think other elements from it is that it was proportionate, it was necessary, it was justified, which is how we sort of benchmark a lot of our operations against human rights act in terms of those issues, so you could put it in that same context as well. [Participant N]

63. The fact that we’re all happy with the decision a week later, means that we’ve got confidence in using intuition. I’m not saying you’d then regret a week later because you think, well maybe I made a poor decision there, so it’s kind of, in some ways if you take it as a kind of confidence insurance point that our intuition stands the test of time. [Participant Q]

64. I think Richard you said that 18 months ago you might have made a different decision, I like to think I wouldn’t have done, but I don’t know, life goes on, and there are other influences that you suddenly think, oh well that’s quite a nice thing to do, let’s just do it, but I think that learning to me is, it’s the sort of thing that comes and goes, it comes and goes. [Participant L]

65. For me I think it’s a reference, sort of shared point in time, where you say the decision is not exclusively a precedent, Karen’s point, that will stand the test of time. [Participant L]

2. LEARNING

66. We’re not making a principle out of that, which is we’ll never spend any money, ever, as it were, on rewarding staff, or saying thank you, or, we’ll judge those on their merit kind of thing. Because my instincts would go against that as an overriding principle, I mean it’s more sensitive at the moment, that feels an extreme example, but there are other examples where spending a bit of money we might want to justify really, does attract negative publicity. [Participant P]

67. I think Karen that’s what you were talking about, when you were saying this doesn’t mean that we won’t do any “thank you”s that cost money, or we won’t do any demonstrable acts, if that’s the right word, sort of, that show we value our staff and we value the work that they do. [Participant L]

68. But I think, Richard and I certainly had a conversation about Owen, the person on the receiving end of this decision, if you like, who also would be the person who had to really publically show that he’d been brought to book and had his decision completely reversed, so I think I remember asking Richard how does Owen feel about that, and I think you said that he learnt by the experience. [Participant L]
69. I think Owen has [learnt by the experience], and I know him very well, and he's creative, he's always looking at options to sort of learn on, and he recognises that if you're going to make that decision today, he probably wouldn't make the same one. [Participant N]

70. I suppose the learning comes, for me, comes from now, here, in terms of the amount of time we spend getting to discuss about how a decision is made, as I’m learning to think about that, not in terms of long times, but in terms of how I operate in terms of future decisions having to make. [Participant N]
1. INITIATING PROCESS

1.1 EXTERNAL DRIVERS

1. I think nationally we’d got crimes coming down, and the fear of crime wasn’t shifting, and it was well what do we need to do? [Participant R]

2. I think it was a disconnect between communities and policing generically where communities thought crime was going up when actually crime was coming down, fear of crime was going up and there was a lack of engagement between communities and policing, so how do you solve that connection. [Participant R]

3. Well I think it was kind of that balance between what was coming through in information, even locally crime was coming down but everyone was feeling that crime was going up so you’ve got a disconnection between the public and what actually we thought was happening on the ground, and a lot of our priorities at that time would have been things that were coming top down, so burglary, vehicle crime which are still important. But the public were saying, as is more evident now, what things really affect us are kids running through our gardens and smashing the windows and the alcohol on the streets. So it’s kind of changing our whole style of policing in a sense to kind of be more reflective of what was at that end. [Participant R]

4. I don’t know if we would have changed had the government not told us to change. And what I say is not us in this room but us the police service nationally. [Participant T]

5. Very much so, it was the government who brought the funding along and also the direction to say this is what you will do. [Participant T]

6. Would we be policing to those standards had the government not told us to, and the simple answer is no. Not to those specific standards across the police service in England and Wales. So it was a government directive. [Participant T]

1.2 INTERNAL DRIVERS

7. I think it was about Christmas 2004 when the Chief Superintendent got me in a corridor and said you are delivering neighbourhood policing and I said what’s that and he said not quite sure, but it’s a national driver in essence of where we want to go as a Force. [Participant V]

8. What we’re doing is that many people at local area level have done neighbourhood policing before but I think it was the lack of structure around it which was the issue, because you had pockets of work where people were getting into the community, be known to the community, deal with community issues but it wasn’t consistently delivered across all the areas. [Participant V]
9. We just had police, like beat managers, beat officers, so we had the four beats in the city centre, and we had, effectively for those four officers it was quite difficult to actually maintain, to satisfy the policing of the day-time economy and the night-time economy, so we looked at how we managed the night-time economy, which wasn’t really very consistent, and there was no ownership of long-term problem solving. [Participant W]

10. In terms of neighbourhood policing across the division, and my instincts are that, it links in with the demand that the division faces as well in that we are not responding to community problems with any degree of urgency, so people will link that with things like antisocial behaviour which is a key driver of negative issues. We are not responding to those jobs as quickly as we should do, so people that live on the area aren’t going to be happy with the service that they are receiving, so when we consult with them through national surveys they are not going to give a positive approach. [Participant W]

11. I guess from an intuitive perspective, it was like, yeah on paper we’ve got a neighbourhood policing team for the city centre, but actually do I feel that they’re actually addressing all of the issues in the city centre, well no they’re not, because they’re only really focussing on the kind of day-time issues, and to an extent that’s what we’ve got on this division now, we’ve got a Neighbourhood Policing Team for [....] South, which includes the town centre, but they are very much focussed on problems around retail crime and people committing offences in the day time in the town centre, and I should never really see that ownership of the problems around the night-time, can be like violence, disorder, drunkenness, etcetera. [Participant W]

12. In terms of the drivers for the problem, which are largely around alcohol, they are the same, and until we can actually convince our problem solvers that that’s the key problem that we need to get a grip on, and actually to start doing some work on it, we will be continually going round the same cycle of going into, sending officers into the town and arresting people because they’re drunk, or assaulting people, putting them into the cell block, coming to work on a Saturday morning or a Sunday morning and finding that the cells are full with people, they get prosecuted, they go to court, they come back around the cycle again a bit later on, and we’ve got to find a way of breaking that cycle here. [Participant W]

13. We had a lot of officers that were responding to demand and just going around and recording crimes, and there wasn’t anybody actually out there doing some real street policing, actually challenging bad behaviour and arresting people, prosecuting people and putting us in a position where we could actually respond to some of those criticisms, but we weren’t actually tackling some of the problems. [Participant W]

14. At the time I was implementing it, the chief officer who was leading it, was very, very clear of this vision, this is what’s happening, this is where it’s going, there was no doubt about this officer, when he said, that’s what I’m doing, you are going to go there. [Participant R]
15. There was a change board on the division chaired by the Divisional Commander at the time who kind of said these are the beats that we want to put in place. [Participant R]

16. We’re a hierarchical organisation, and the person at the top says we’re going to do it, then maybe can we turn around and say we’re not going to. [Participant T]

1.3 UNCERTAINTY

17. I suppose almost a summary of it is that the government said you’ve got to deliver neighbourhood policing, but we’re not going to tell you how to do it, so that went out to the 43 forces in England, Wales and Northern Ireland quite possibly, I don’t know. It was a case of this is a concept we want you to deliver, there is no rule book on how to deliver it, so you’ve got 43 approaches to delivering it. [Participant T]

18. I don’t think there was a force lead at this point, there was kind of a vacuum of what does it mean to the force aspect of it... so it was just about trying to figure out what it actually meant to us as individuals. [Participant V]

19. So the first decisions were there without a lot of information, without a lot of guidance. It was kind of you interpret this national stuff in the way that you want to do it locally and find the best way of doing so. [Participant R]

1.4 COMPLEXITY

20. There were some key decisions to make right at the start which still keep getting revisited on, who are our communities, how do we find out what their views are, how do we prioritise the things that are important to them, what’s the best way to tackle those and then how do we tell them what we’ve done. That was kind of the concept of what we were being asked to look at, so if you look at where we started from, the decisions we had to make were how do you implement that, it’s quite a lot of information, and then how do you roll that out across the organisations. [Participant R]

21. So the original decision was how do we create something that does this connection with the public, finds out who they are, goes to engage them effectively, then finds out what the problems are, tackles it and then kind of feeds it back to the community. [Participant R]

22. At that time we were probably very much of, we’d got beat teams but it wasn’t formalised, we determined what we tackled as an organisation, so this term ‘responsive’, we’ve got to find out what the public want, that was probably less of a priority for us, than actually doing what came across and we thought as professionals. [Participant R]

23. We had to shift from tasking ourselves to kind of trying to introduce a whole range of new demands, we’d not done engagement in a systematic way before, so we had to understand that, we had to create systems to capture it, and there was a
whole range of different things, so it's process changes, behaviour changes, political changes, because some of the politicians were sceptical locally of, is this going to work? [Participant R]

24. ...how do we improve that understanding of our communities, how do we improve engagement, how do we improve intelligence about what's happening in those communities, and then how do we feed back to them. [Participant R]

25. So the real shift at that time, and it seems quite straightforward now, although we're still working at it, was we'll go out and ask the public what they think their issues are, and that was kind of, that point, was quite a big thing for us, because well how do they know, there's all, there's that professional egotism that perhaps comes into it. It was a big shift on behaviours and process really, because we had no mechanism, real mechanism to, on a regular basis, go and speak to the public. [Participant R]

26. So there is a range of different things, but it literally was a whole change of policing, being managing its own destiny, to saying to the public, you now tell us, and then how do we propose problem solving, which again wasn't, still isn't endemic on how you understand something, how you deconstruct it, work out where the key issues are on and then tackle it. [Participant R]

1.5 TIME PRESSURE

27. Because we didn't have the time, it was like you've got this to implement, get it done. [Participant R]

28. I think if we'd have done that right at the start, we'd have started building on a strong foundation, but the timeliness of it, well it was made that we needed to do it quite quickly. [Participant R]

29. It was very much seen as, well this is the police initiative that you're doing, as opposed to you're consulting, but with the timescales it was important to make sure we'd got something on the ground working that we could then build on the product. [Participant R]

2. INTUITING PROCESS

2.1 ANALYSING

30. Did I know the programme when I first arrived yes, did I have the confidence to get it all moving now, well no because I then thought through rationally the consequences but I still knew that I wanted a team in place which is in place now. [Participant R]

31. I think when you've got more time to think rationally through it, and to develop single bits of it, then it gets embedded even better. [Participant R]
32. Because we don’t manage change by chance, so the intuition needed to be backed up with some change management. [Participant R]

33. There’d been a three year evaluation of a reassurance pilot, so there’s some in the North East, and throughout, so there’s a wealth of academic research on confidence, engagement, reassurance, so it was based on valid, national, academic work. [Participant R]

2.2 SCANNING

34. There had been what we’d call ‘reassurance pilots’, so what would work in a community to reassure them we were tackling the fear of crime, and what that kind of started to show, dedicated teams, known to the public, delivery, problem solving, getting back to people, was actually a way forward, so that came out of the organisation. [Participant R]

35. When we first went to look at it, we actually go and look at the pilots, the two pilots that were running, and found them to be entirely different from one another, and so that kind of left us a little bit like, well okay, so you have kind of got the opportunity to work out what you think is the right way to go with this. [Participant W]

2.3 GUT FEEL

36. So first and foremost you have to think to yourself is that right, for me is that right? I looked at it and thought yeah it is right. We are at the right stage so therefore you get the commitment, because if you are going to deliver something that way, or you are going to go through any decision, you have to be comfortable in the decision you make. [Participant V]

37. I think it’s about emotional decision. I mean, mine was, I didn’t actually give it a lot of thought around that one, did it feel right, yeah it felt right. We were at the right place at the right time. Yeah it felt like we were at the right place at the right time. [Participant V]

38. Mike kind of thought, I need to do something different, this doesn’t feel right for my area. [Participant R]

39. So a lot of the delivery has been based upon the intuition of the people who happened to be working on it at that time, to say this is what I think it should look like. [Participant T]

2.4 EXPERIENCE

40. So the intuition within this example comes down to, well you’ve got to deliver something called neighbourhood policing but make it up as you go along, but in effect we’re going to trust you to come up with the best model of what you do based upon your experience. [Participant T]
41. So there were things that came in right at the start that we knew from the context of the area, that we knew from our experience of the communities as well and we knew from what probably our levels of knowledge and our engagement were so I had to kind of interact with the communities and also probably some of the levels our staff were at the time because this was a big change for them. [Participant R]

42. I think maybe everybody in here will have a model that they can apply to the decision making, and to some extent, whether or not you can go through it every time, because of some of the training that you’ve done, some of the jobs that you’ve actually worked on, but they’ll be in your thought process regardless, so that will link in with your intuition a lot of the time. [Participant W]

43. The good instinct is down to your experience and knowledge, your view of the future so you can react to it quickly rather than think “oh I’m not quite sure of this, I need time to think, have I got time?” [Participant R]

44. Where the intuition then came later was having learned the lessons of community... So actually there is something about this being about neighbourhood management and not just neighbourhood policing. [Participant R]

45. But I’ll know in my own mind what’s right. I think that’s down to me and my experience across a broad range of issues. [Participant V]

2.5 CERTITUDE

46. So again, I guess the intuition was a) we went for the difficult areas because we thought it would work, b) we kind of let free out in the community, and at a really busy time, we decided to almost commit professional suicide and say we’ll obstruct these officers and carry the risk. [Participant R]

47. We gambled and said, yeah, we need to go out and let the public agree the priorities, because other areas in the country, they were kind of determining their own based on surveys, and Roger and myself we’re very clear we have to take a leap of faith, if we’re really going to get the responsiveness, the public have to have a say. [Participant R]

48. Because in this decision I never had any self doubt, is that me or shall we just go for it and that’s what it is. [Participant V]

49. I think with neighbourhood policing we knew it was the right thing to do. [Participant R]

50. So neighbourhood policing, I think, it’s still, we still think we’re doing the right thing, we believe it’s the right thing, which is working through each time we develop it. [Participant R]

51. They ignored the advice because their intuition told them to do something different. [Participant T]
52. We probably all make intuitive judgements, but what we’re actually talking about is having the moral fortitude and resilience to stand by the decision you make whether you rationalise that or not. Or maybe come up with a false rationalisation just to justify it but it’s about having the confidence to say yes I’m actually going to do it and then follow that through. [Participant T]

2.6 SUBJECTIVE

53. So the decisions that Roger and I made were quite arbitrary in the first place and what we thought would work in that context. [Participant R]

54. Because part of the culture again is that we provide advice documents a lot and then people because of this framework turn around and say no I don’t think that’s right I’ll go and do something else. It can be counter productive within an organisation that if everybody is using their gut reaction, everybody’s gut can tell them to do something different and you’ll end up with non specific delivery. [Participant T]

55. If that intuitive decision is going to go wider, be it a burglary group, be it a change programme, be it a working document on how things operate, without that the intuition is kind of very individualistic, and it sits with yourself and your credibility, unless you put the frameworks in, it will just stay in that one point and shrivel up at a point in time. [Participant R]

3. INTERPRETING PROCESS

3.1 VISUALISING

56. Gavin came along and because he wanted to be a Chief Superintendent he did these charts in my office in [.....] and it was a wonderful thing to behold and it’s a shame I didn’t digitally enhance it because it would have gone into the interviews! [Participant V]

57. I’ve drawn it on Roger’s board, I think it was a case of I read some of the research documents that were out there at the time, I think that’s what happened. A fair bit of much of what we do and then based on those research documents kind of try to make some sense of what it was out of that and then kind of drew that on Roger’s board. [Participant R]

58. I drew it on the board for Roger, in one go, and Roger delivered it, and that was it. [Participant R]

59. So we had all this scribble on the board like that and around that and then what I had to do was I had to understand of a) what the organisation wanted and b) what we could deliver in my small area of [.....] and take that and deliver the picture into some sort of reality and that’s where the process is started. [Participant V]
60. There it was up on that board and then fundamentally he left it with me to interpret it using documents from Home Office. [Participant V]

61. I think it's the way people's mind operates, some people's mind operates best in the written word, and some people's mind operates within the picture. Now I operate better like Gavin, with the picture, if I can see things and I can picture things on a single piece of paper I'm much more comfortable and then can remember. It's understanding where the person who's trying to tell you something is coming from then interpreting what that is, because that's what it's all about. [Participant V]

3.2 DIALOGUE

62. It started with who are our communities, and that's what I need Roger to look at. Either you kind of break down this geographic area into communities because we can't take all of it. So that was the first one and we kind of had a quick decision that it probably should go with the beat areas which was a smaller thing that was already in place, and how do we best engage and then we had a lot of discussions over how. [Participant R]

63. Normally policing at that time what would happen is that people would phone with incidents for us to tackle and then we tackle it and we decide our priorities, this was kind of a big shift with regard to communities to say what it is you want to tackle. I think we had a lot of discussions about is it three priorities, is it two priorities. [Participant R]

64. So it literally was a 20 minute discussion of, this is what I think, Roger was, I get that, next time you come back and it was then we met every so often. In the first point we didn't do any project management, it was like me coming back and going, how far have you got. This is where I'm at. And it's only later when it was rolled out across the force, because I think we didn't want to put a load of obstacles around it, which was kind of let's see how it takes us. [Participant R]

3.3 RATIONALISING

65. So my instincts were that we needed a street team in the city centre and basically to achieve that it would have meant that everybody else would have to give up some resources to achieve that. [Participant W]

66. My instincts were that we need to set up some kind of initiative whereby we can get to those jobs quickly, we can respond quickly so we can be in a position to make people feel better. So I guess the kind of instinct to this is that we need to change the way we manage the night time economy and we need to change the way we respond to local issues. [Participant W]

67. The way that the neighbourhood policing should work should be you should go through that process over a kind of three month period and then all the results of all your surveys and your street surgeries should come into a meeting, which is for local people, local stakeholders to be involved with, where you actually
determine what are important local issues within that community, where we can actually work together with partners, to make a difference to improve people’s standard of life. [Participant W]

68. So it was around these are the public biggest areas that we could go to, this is the format of engagement, so we’ll have these meetings every six weeks I think we set at. At those meetings the public can turn up, we’ll listen to their priorities and then we’ll go and tackle them. Probably had no more than three because we tried to work out what we could manage without being overloaded, and again that was kind of just a feel for it more than anything and then what we’ll do is feed back to them at the next meeting. [Participant R]

69. So what we’ve said is that to ensure consistency, how’s that going to work, right well what we’re going to do is we’re going to try and identify critical areas within each of the beat areas, visit one of those streets, and put up another table that we call a street surgery, and what happens there is, you’ll identify a street, you go along to it two or three days before you actually want to sort of have your street surgery, you’ll actually do a letter drop to every house on that street saying, on Wednesday night between 6 and 8 p.m. your local neighbourhood team will be down here, we’ll be really interested to come and see you on that night, to find out what issues are important to you, here’s a survey that you might complete, just prior to coming along on the evening, so we can actually get a better feel for what those issues are, and we can collate them with everybody else, and you publish that and actually make it clear that anybody else can come along to that, not just people on that particular street. What you then try and do is ensure that, as well as the police turning up on that night, you actually get the Council to turn up as well, so there may be a local Councillor or at least officers from the Council that can impact on local services. [Participant W]

70. Your intuition may be the starting point but then you are going to have to rationalise it, you are going to have to research it, you are going to have to be able to evidence it, or if you’re not going to be able to take other people with you you’re not actually going be able to get support for it. [Participant U]

71. If you are challenged about what is your rationale for making the decision, part of the culture of this organisation means that it would be quite hard to turn around and say “it just feels like the right thing to do”. [Participant T]

72. But you know I think it was the logic that sold, you’ve got to translate gut instinct. [Participant R]

73. That’s the point I make that I think it would be very difficult for any one of us to turn around and say “well I am doing this just because it feels like the right thing to do”, with no rationalisation at all because if you didn’t you know... [Participant T]

74. Because I was trying to sell it to people that wanted to change it themselves, and it was the logic that kind of, to start with from my intuition and making sense of
it, it was the logic that sold it to Roger and I had to use the same logic internally. [Participant R]

75. It’s very hard, and maybe within the business that we operate it might be the gut reaction but that the nature of our business means that you then have to rationalise it and appraise it against an acceptable risk to say what is the risk if this goes wrong, because in our business if something goes wrong, particularly in the fast time stuff the consequences can literally be death. [Participant T]

76. To be able to sell it I think you have to deconstruct why you’re doing it if you’ve not got the credibility or you are kind of a couple of years ahead of making sense of stuff and not taking people with you. [Participant R]

77. Because we’ve got so many checks and balances within an organisational structure that I think with these things you may have the intuitive feeling about something and well, I think that’s right, but there’s so many checks and balances that you end up getting almost potentially self justification so the rationalisation supports what you think anyway or challenges it. [Participant S]

78. The test for me is the policy log. How many of your policy logs just go “because it felt like the right thing to do”? We have a process for any critical incidents or investigations, I’m making this decision now and then you rationalise as to why you are doing it. [Participant S]

79. Yeah but which comes first do you think. The issue being is that you make that instant judgement if you want to call that and then what you do is, in many cases, search for rationale around that and so when we talk about that judgment time issues there we are perhaps giving ourselves too much credence. What we are saying is this is what we are going to do, now rationalise it. [Participant V]

4. INTEGRATING PROCESS

4.1 INVOLVEMENT

80. Well I mean I wasn’t really, my involvement came later on, as part of the implementation process. Well supporting the implementation processes, but being required to provide and deal with information in support of the process that was being influenced by other people. [Participant U]

4.2 CONSULTING

81. We’ve discussed things and put it forward and checked it out with each other and the person who kind of put it forward as in policing our original start was kind of intuitive and this is what we are doing, we’re going to move it on, but as it got negotiated through the organisation, other people chipped in and said this is how we’ve done it, this is how it works, then it morphed into something that became probably still based in what we originally came up with but morphed into this intelligence part of it now. [Participant R]
82. We literally picked up the model from the City, put it to the centre, got a representative from each team and said this is the model we need to implement. So what's your intuition? [Participant R]

83. We managed to get somebody from County Council for neighbourhood management to work with us in the team, so we were understanding things differently we went to kind of local politicians, presented it to communities, through similar points of contact, so there was a fair bit of consultation, probably could have been an awful lot more. [Participant R]

84. So I developed a discussion document that's going round to canvas views of all my colleagues as to whether they think my intuition if you like about what we should be doing is right. So hopefully what will happen with that is, it will be modified depending on what people's views are. [Participant W]

4.3 INFLUENCING

85. As then I got moved to HQ to be the change manager to deliver it across the organisation I had to move from some of the beats that we made quite quickly to actually to get them to agree to that beat I need to try and change it a little bit, still staying with the original ethos that we had, but as it kind of became broader and more people involved who couldn't actually be pushed into it by drawing a picture, had to do it differently. [Participant R]

86. We managed to persuade local community workers to help us do the meetings, because some communities weren't ready to engage with the police at that time, so they did it on our behalf, and that was another kind of leap of faith for them, as much for us. [Participant R]

87. I think persuading some politicians that it was important to get to the wider community to find their issues, rather than having to just come through dedicated things, so there were structures in place, but they weren't probably as inclusive as they could have been. [Participant R]

88. I think you had to sell it to your beat teams so don't underestimate. [Participant R]

89. You've actually got to get people to want to own it and mind it, because actually it's more of a collaboratively team thing that you are talking about in a social context. [Participant R]

90. I think the difference is around communication, because if you've got a rapid time intuitive decision that you are making then you get people to comply with it through discipline and through the fact that you are accountable for it because it is a fast time intuitive decision. If you are making a slow time business decision and looking at it intuitively, actually that's not enough on its own because you need to take people with you, you need to win hearts and minds, to put it crudely. [Participant U]
91. With the command structure that we have, whilst we sit in a team context, there is a hierarchy to that team context, so you are still sat in a team but you have still got to take people with you, but actually if they are not going to come with you because you are the accountable person, they are still going to come anyway aren’t they. This is the decision I am doing, it’s non-negotiable, I agree with the information I’m going to do it. [Participant R]

92. There was a long process of getting buy-in from upwards as well as at the same rank in the organisation. But ultimately people could see the benefits of what was being suggested. [Participant W]

4.4 CREDIBILITY

93. The other interesting thing is whether people will follow it because they’ve got to have confidence in the leadership. [Participant V]

94. One issue is a leap of faith, and that if you have a leap of faith, other people have got to have faith in you that you are making the right leap. And so you can have all the intuitive decisions you like, if you are seen as an idiot, people will not... [Participant V]

95. So I think the communication will only work thus far if it is a leap of faith as far as personal leadership can extend it. [Participant T]

96. It’s based on their experience of you about whether you led them well. [Participant V]

97. The person I actually sold it to was my Sergeant, and bear in mind at the time he’d got something like 19-20 years in and all at [...] where I was, and I’d got something like 20 odd years in and we weren’t bright eyed so if we went out to our beat teams and said this is good, they just said “okay”. [Participant V]

4.5 COMMUNICATING

98. The key bit in terms of intuitive leadership is if it’s not connected with good communication then it can fail. Because you can’t make the connection where you’ve gone with your intuition into actually why you need to do it in the first place and that’s what we ended up doing a lot with trying to talk to people about why. [Participant R]

99. I think that the biggest difficulty is about communication, getting people to understand what it’s actually about. [Participant W]

4.6 CONFLICT

100. We’ve got people in posts that actually not everybody’s bought into the idea of community engagement, and actually identifying local priorities and working to them. [Participant W]
101. When you look across the whole of the organisation, there aren't that many people that have actually got that degree of vision about what it all means, and even though we’ve spent a lot of time and effort in trying to communicate that. [Participant W]

5. INSTITUTIONALISING PROCESS

5.1 SYSTEMATISING

102. We have neighbourhood teams across the whole county now, if you were looking right now, almost following the same procedure that we started with after 20 minutes, even the national level is not far off that 20 minute chat. [Participant R]

103. Those standards have been set, and they’ve been set nationally now, through the pledge, everyone’s kind of coming into line with each other around what we’re delivering. [Participant W]

104. We have engagement strategies, we have neighbourhood policing plans, we have web sites, we have computer packages, to look at problem solving, we have regular processes around the inter communities, types of poster that can go out, everything is regularised now. [Participant R]

105. The policing pledge has evolved out of kind of what we’re doing on neighbourhood policing, and what was called a Quality Service Commitment, so they’ve kind of come together to equal the policing pledge. [Participant R]

106. The policing teams I think is one of the big investments that’s been made, and yeah, they’re starting to say, well what are we now getting for it, and we want consistency across the country. [Participant R]

107. It’s the longevity of it, if it’s seen to work then it becomes part of corporate business, so I’m sure that there are things that Roger and Gavin developed that have become part of accepted corporate business. [Participant T]

108. So we set up a street team in the City centre, which was three Sergeants and 18 Constables, in addition to the four Constables that were the neighbourhood beat managers for that area, and we devised a shift pattern that meant that they worked at all the critical times of the week, to sort of cater for the fact that it is a 24 hour place, so we had some ownership of both day-time and night-time problems, but actually delivering that set up was quite challenging because it meant that I needed to increase my establishment to achieve that. [Participant W]

109. We developed a street team within the City centre that became the core of our neighbourhood policing and helped us to engage but also to be positive around enforcement. [Participant W]
110. It was a case of this is how we’re going to have to engage, so that was kind of part of the model, do you know your community, secondly it was this is how you’re going to make the decisions, and how you’re going to make all the priorities. It was kind of that, they would have a public meeting, having done engagement, and the community would be invited. [Participant R]

111. So what we’ve said is if we can do that on every one of our beats, once a month, that’s over 400 engagement events per year, which we’re going to be doing as a standard. [Participant W]

112. What is happening is that each beat, and we’ve got 36 across this division, is expected to have one official engagement event per month which goes onto the website, so that members of the public can see when they can actually engage with their neighbourhood teams, so part of the pledge sort of commitment really. [Participant W]

113. We just this week gone to the stage where our priorities are now going onto our force IT system, so if somebody rings in to report a particular incident that is one of our priorities, then they’ll start flagging up within our control room so we can send resources out, at the right time, and again the final bit of that equation is they’ll aim, hopefully to be attended within an hour, that’s the first thing. But we can then start to produce some performance figures to the public to say how many of those incidents we actually got to within the hour, and those, the policing priorities that we’ve identified, they go onto our website as well, and our beat teams, so the beat managers and PCSOs they’re responsible for ensuring that, a) the priority goes on there, but b) what are we doing about that priority that goes on there, and then finally, well what have we actually done about it, so that people are updated. [Participant W]

114. Big, big work and lots of people are involved in at the moment actually driving that along, so that actually all those different stages will get put together, so that if you or I lived on an area and wanted to find out what was happening about local issues, we should be able to log on to our local police, our local beat, the local problems, actually okay what have they done about it, and actually if I want to go and talk to the beat managers, how do I find them, I’ll find them by doing this. [Participant W]

5.2 ADJUSTING

115. The question to ask is, if it was intuitively right in 2005, is it intuitively right now? Why are we still having to work really hard at getting embedding, and I think if you look at when a decision didn’t work, we still think the decision was right, but it’s such a behaviour change, that you have to reinforce with process changes, and I think that’s what we’re still working at, at the moment, got to get the right people, got to get the right processes to reinforce the behaviour, so we are working still really hard embedding neighbourhood policing, and we’re kind of four years down the line. [Participant R]
116. Still being reviewed but its actually going through a series of changes and it has been embedded but it still keeps getting looked at and reviewed at the moment. [Participant R]

117. Now in terms of almost as a stage review if you look at project managing it you’ve had the policing pledge, this came out in sort of last year and we are working to it now which is sort of putting some performance measurement around it mainly for the first time there was some specific direction from central government on what we should have really been working to achieve over the last few years. [Participant T]

118. What we’re saying here is, as we made the decision to implement, in that area did it make a difference to people’s lives, it did, but then as time’s gone on, the context changed, and people want different things from it, so the goal’s shifted again, so the decision to implement it was right, intuitively it’s now got to keep coming. [Participant R]

119. It’s kind of an evolving intuition, in a business sense, because how do we know, how do we change it again, to keep up with the new context. [Participant R]

120. You’ve got to keep interpreting the future, even if you’ve gone with one decision or one model, say, if everything’s changing, how do I keep it up to date, and I think that’s probably where we need to kind of keep relooking at, how do we continually evolve this, keep looking at it, and understanding the context to agree with it, so the models will be right, but we’ve got to keep kind of refining it, to tailor it to the context. [Participant R]

121. Do our communities feel confident in what we do, do they feel engaged with what we do, and there’s still the time to do, but the actual decision, in terms of should we do it, or should we not do it, yes, did we put people on the ground, yes. Has it made a difference in the short term, yes, is it finished yet, and is it still where we want to be, well no, and there’s still some work to do on that. [Participant R]

122. Has neighbourhood policing made a big improvement, yes it is a big contributing factor. Are the expectations different now, well yes, they are, so you’ve got to keep refining it. [Participant R]

123. We’ve now got a problem solving co-ordinator who’s looking at the process, and the nuts and bolts, we’re meeting with a company to look at social marketing, so our messages are different, the way they go across, we’ve now got somebody who’s auditing all of the way that we do the pledge, so that we get a reality check on what the public see on the ground, we’re really looking at how we tackle anti-social behaviour, because that’s one of the real kind of quality of life issues, so our whole effort at the moment is around that, we’re doing problem solving training from our offices, we’re developing them in terms of the powers that they can use to support the public, we’re putting resources into the areas that have got the biggest risks, and we’ve got a whole communication plan at the
moment that's starting to say this is who we are, and this is what we can do for you. [Participant R]

124. Probably the application of it needs to keep evolving, but the basics are probably still relevant. [Participant R]

125. I mean things have changed, when neighbourhood policing came in, not everything came in at the same time, so for instance your website, with all your contact details and your websites and publishing all of your priorities, that wasn't there straightaway, but that's something that's evolved as we've moved forward, but now there's a lot more emphasis on actually making sure that it's right, it's kept up to date, and that it reflects everything that's needed from the pledge, so there's, we're going through a quite an intense period at the moment of revisiting stuff to make sure that everything is as it should be. [Participant W]

126. But we're kind of working through it, and it's all being revisited as we go through the kind of preparations for the next sort of county inspection, and I think officers are now starting to get more focus on what's actually expected from them. [Participant W]

127. It's very sophisticated now, and we're using more technology, and it's evolved in and places have used Facebook and everything else, well it wasn't there in 2005. [Participant R]

128. There was some mapping going on and certainly we had to increase supervision levels, because during this whole process we were then given PCSOs, and when we looked at the span of control between a Sergeant and what was a small beat team, you've then got a Sergeant and 10 PCs and 10 PCSOs, which is unachievable. So there was definitely structural changes, and people changes we had to make, and we look at what we'd invested in the communities pre-2005, and what we've invested now, it's a different situation. [Participant R]

POST-DECISION PROCESSES

1. REFLECTING

129. What this did to us I think was to make us stop looking at our navel and look out to the world. [Participant V]

130. This has been a move away from focusing on crime to quality of life matters. So it's similar to the policing pledge that we are dealing with at the moment. [Participant T]

131. Became more outward facing. I think we became more focussed on those priorities. [Participant R]

132. I think we've changed the way [POC] police in some fundamental understanding of it. We've turned it from internal to external, and listening to
different audiences, because Mike's audience is different, you see, to mine, it appears different, we've broadly set this organisation to look outwards, rather than continue to look inwards. [Participant V]

133. The fact that we meet every six weeks to determine three priorities which is what we started with that is maintaining engagement, and around problem solving, it's still at the centre, so we weren't far off on the intuitive bit. [Participant R]

134. My observation is that as we've started getting more into a performance culture that some people feel a little bit challenged by where you've got the pledge, and the pledge reinforces all the good things around neighbourhood policing, all the things that should be there, but when you actually start looking at it on a micro detail, on a beat level, you find that there's lots of areas where we've not done everything in as much detail as perhaps we ought to have done. [Participant W]

135. I think if you look at our satisfaction figures, they're continually increasing, but that's overall effort, when we come into contact, if you look at some of the feedback that we get, there are pockets of good practice, if you look overall, in terms of confidence, then it's not a success in this area, if you look in terms of nationally, yes there is a steady increase, but it's probably not delivered across the board yet what it intended to do. [Participant R]

136. I think we've now seen when lots of different things come together, and neighbourhood policing is just one part of it, when good investigation, good communications, good partnerships are working, confidence increases, so if it was designed around confidence there's still a way to go. [Participant R]

137. I think then it's another process, and we've brought a lot of complexity in, but really simply, do you know your area, do you engage effectively, do you identify key issues, do you tackle it, and do you tell them that you've done it, but we've never really got that fully embedded, so I think the behaviour change didn't happen, and probably we've got some people who don't feel comfortable in this move, and the second bit of the processes and our constant leadership, I mean consistency in leadership to make it happen, they're the bits that I think are missing. [Participant R]

138. I think it's also had a huge impact on our staffing, because if you look at the organisation people migrate to certain roles for certain reasons, and people that have migrated into the beat manager role, didn't necessarily envisage neighbourhood policing being round the corner, and some of the expectations that that would place on them was, as beat managers, and I think we're still recovering from that to an extent. [Participant W]

139. I think it was initially a good understanding of the requirement, applying it to constructs, and having some freedom and buy-in at the start. I think if we're being constrained, maybe it would be more difficult. [Participant R]
2. LEARNING

140. I think we probably would have had a wholesale selection process for it, rather than trying to build on people who were already there, so again it would have been a selection, de-selection process, saying have you got the skills sets to deliver what’s important. [Participant R]

141. I think if we were going to go back in time, I think the gut was barely internal, and we did it initially very much within policing, I think if we were going to go back and look at it again, it’s all about context at the time, means we’d probably try to bring wider agencies on earlier than we did, so it became very much a neighbourhood provision completely, rather than by communities. So with hindsight, and that wasn’t generally in the wider context at that time, making a partnership, maybe that’s the bit that if we went back and rationally re-looked at it, with hindsight, then that would have been the difference. [Participant R]

142. On the Force level, I think if I’d had more time, we could have spent more time being consultative, and getting partners with us, but equally partners weren’t ready at that time. [Participant R]
Appendix 7

Categorisation of ‘Intuitive Misses’ Thought Units

Intuitive Miss Case 1 p. 414
Intuitive Miss Case 2 p. 430
Intuitive Miss Case 3 p. 442
Intuitive Miss Case 1

1. INITIATING PROCESS

1.1 EXTERNAL DRIVERS

1. Most of the information comes through various routes. The majority of this sort of information will come from a member of the public phoning up. [Participant F]

2. We were getting information that comes in through various sources, so, for example, if an officer stops somebody on the street, and they tell them the information, they’ll submit a form which will then put that information onto our systems, likewise if somebody were to ring Crime Stoppers, or ring into the police anonymously and pass that information. [Participant J]

3. So there was a number of reports from different sources, that the people who were using this address were selling heroin and crack from the address. This intelligence was coming in from January. [Participant J]

4. January until about April time the intelligence was coming through about the person who lived at the address, not specifically about the address, and it was a lady who was living at the address who was letting all these people come in and sell drugs from there. So the intelligence was coming in that she was actively having people round to her house, and that drugs were being sold from the premises. [Participant J]

5. There were various bits saying this person is linked to the address, this person is linked to the address, these people were stopped a couple of weeks ago, and gave their home address as this address, and one of the pieces of information was that, to prevent police gaining access to the address, the occupant had barricaded the front door with a washing machine. [Participant J]

6. Up until the end of April, there was intelligence that this address is, well not this address, that the people that we believed were linked to this address were actively selling drugs, and it was only a matter of maybe two weeks prior to our warrant being executed that somebody had given it as their home address when they were stopped by the police. [Participant J]

7. So the information that we were going on was, some of it was from January, and some of it was from the end of April, but it was continuous, do you know what I mean, there had never been a natural break in the intelligence, it had been consistently coming in that the people linked to that address, the people who were our subjects that day, were dealing drugs. [Participant J]

8. So yeah there was lots of different types of intelligence that were coming through, and we type in the address that we were going to go to, and all this
intelligence pings up, and there was a lot of it, and it was ranging from January until a matter of weeks before the warrant was executed. [Participant J]

9. More than one report came in from more than one source and the providence of the intelligence was good, a lot of the intelligence that was coming in was from sources that have been previously sort of tried and tested as it were, by the police. [Participant K]

10. None of the intelligence reports actually said that the address was the address that we carried out the warrant at, but the assumptions were made, because that had previously been her address, that was her last known address on all of our intelligence systems, and also that it was, people had their cars registered, contacts of hers, linked to her, associates of hers had their cars registered to that address. Just a couple of weeks prior to the warrant being executed, somebody who was linked to her was stopped by the police and gave that as his home address. So the information was coming in that the people who we thought were linked to that address were selling drugs in the, sort of in and around the town centre. [Participant J]

1.2 INTERNAL DRIVERS

11. What we do is we get the information and that week we were doing a week of action, so we were carrying out loads of search warrants, and we had some proactive operations in and around the town centre and stuff. We asked for a number of addresses that we should target, through our intelligence unit here at the police station, and that address was one of the ones that we were given to target. [Participant J]

12. As far as we knew, as an organisation, because there’s errors as to how the intelligence has been submitted sometimes, as far as we knew the address that we were going to was going to be housing the people we were looking for. [Participant J]

2. INTUITING PROCESS

2.1 ANALYSING

13. We get intelligence about someone dealing drugs at a certain address, we will then look into that, with a view to corroborating that evidence because there’s always the fear, that I decide I don’t like you, and I phone up the police and say, you’re dealing drugs, so we will always look to corroborate the evidence, so that means otherwise we’re looking to get the same evidence from different sources, or indeed we will use our own intelligence systems, go and gather our own intelligence to say, yes, that person is dealing drugs. So we end up with a situation at this address, we know there’s someone dealing drugs there. [Participant F]
14. Any information coming in we start grading that information, even if we have A1 fantastic information that we’re really sure was true, we would still look to corroborate that evidence. We will still look for evidence or information from another source, another route. [Participant F]

15. You’re in this world trying to get at least two systems of making sure that we’ve got the right address, the right people, saying in this house people are dealing drugs. [Participant F]

16. And with warrants as well, in most cases, you have to have more than one piece of intelligence. So in January, yes, there was some intelligence that said, there’s potentially drug dealing from this address. In most cases that isn’t enough for us to go to a Magistrate and say, “somebody, somewhere has said there’s drug dealing, I want to go and smash that person’s front door in, and look for drugs”. No, they wouldn’t give it to you, so you have to corroborate the intelligence. [Participant K]

17. Intelligence comes from various sources as well, it could be a scorned girlfriend has phoned up and said that he’s drug dealing from the house, you won’t action that intelligence, through fear that it could be false, it needs to be corroborated, which is why it took from January to when the warrant was executed to corroborate the intelligence. [Participant K]

18. Well it was checked, we weren’t anal with it, maybe we should have been. [Participant K]

19. If we were that anal with every single job that we did, we would never do anything, we’d never achieve anything, you wouldn’t, you haven’t got time to do it. [Participant K]

20. No, there were less [checks] carried out on this than there would have been. Yeah, normally, at the very least you check who’s paying the Council Tax, and whether anyone from that address is claiming benefits. [Participant J]

21. It would have just taken a couple of phone calls probably to check with, if they were claiming any benefits, if they’re on for sort of housing allowance, we could have done checks as to who’s paying the Council Tax at the property, and things like that, but in this case, because we were given a batch of addresses to do in a Week of Action, those things weren’t done. [Participant J]

22. So sometimes you haven’t got time to make the checks, sometimes there’s too many checks, sometimes you assume other people have made the checks, and it just went unchecked sort of thing. [Participant J]

23. I think the issue here is one of proportionality, if you did all the checks you could possibly do, we’d never do any warrants, because we’d be doing checks all the time. [Participant A]
24. There is this thing about proportionality here, whereby actually if you build in too much in terms of risk prevention, or whatever, you actually don't do anything, do you, because you become to some degree paralysed. [Participant A]

25. Do you know, if you build that check-list, where do you stop, it's really difficult, isn't it, because it could be just such a hugely bureaucratic process that, as I say, you spend all your time managing a process as opposed to taking action. [Participant A]

26. We had source information in relation to the address that we did, which is why, another reason why we did the warrant, and didn’t just carry on corroborating. [Participant K]

2.2 SCANNING

27. I went with my colleague prior to the warrant, had a look at the front, I wanted to see is there a washing machine there, I couldn’t see through, it was a completely solid UPVC door, I can’t see through, I had a look at the back wall, looked into the kitchen, to me it looked a state, there was a pram there, I was aware that the subject of the warrant had a young child, the kitchen looked a mess to me, I thought I’m happy with this. [Participant K]

28. We were looking for, on this, is there any activity at the address, are they there, what’s the best time to hit that door, what, when are we going to execute the warrant, the warrant is valid for a month. [Participant K]

29. People had gone, we'd been sending people up, we didn’t just go that morning and do it. There was, a couple of days before someone had gone and had a walk past in plain clothes, a week or so before someone had gone and had a walk past in plain clothes, curtains were always closed, garden was a mess. [Participant J]

30. It's just I'm going, in my head. I've got this address, this is the address that I'm going to hit on a drugs warrant, so I'm just looking to corroborate what I've been told is, I'm to expect inside, and from what I looked at it, in my mind it corroborated it. [Participant K]

31. Yeah, you know, it's not a nice address with the curtains drawn and flowers on the window sill, and, yeah, it looks like a drugs address, I'll be happy with that. [Participant K]

32. That's part of what we were doing with this, is it right to hit it this morning, if it's not, then we'll go elsewhere, if the curtains were open, and we couldn't see anyone, there was no vehicles anywhere, there's no sign of life anywhere, maybe we wouldn't have done it. But from what we could see, the curtains were drawn. [Participant K]

33. I live with my partner and little baby, are the curtains always drawn, no they're not, during the day they're open and all the sun's coming through. Is it normal to have your curtains closed 24/7, I don't think so, is it normal for a drug dealer to
have your curtains closed 24/7, yes. If you live in a home, as I said my partner’s very clean, and the kitchen is mint all the time, this, the one that we looked at wasn’t, it looked a mess, and there’s a baby’s pram there, that corroborates, yeah, I know that the subject of the warrant has got a baby so, everything looked correct from my experience with the drugs side of things. [Participant K]

2.3 GUT FEEL

34. You said already that your gut feeling was that you went past the house, the kitchen looks like a mess, the curtains are always closed, gut feeling is that house is being used by drug dealers. [Participant J]

35. So your gut feeling was that there was nothing wrong, and we should carry on and do it. [Participant J]

36. I guess the other interesting thing, the intuitive piece for this with me as well is about how we reacted to Steve, there was, intuitively we all felt, I think we needed to do more with the media, but also in terms of how you respond to the individual members of staff concerned, their personal reputations. [Participant A]

37. I mean you could write it down and rationalise why you’ve come to that conclusion, but a lot of it is about gut feeling and intuition in terms of how you react. [Participant A]

38. I think that, on a number of different levels there, we exercised gut feeling in terms of how we responded to it, so there was the external management of the media and reputation, there was also the internal management of the staff concerned. [Participant A]

2.4 PROFESSIONAL JUDGEMENT

39. People who make decisions, based upon the information available to them at that time, there has to be professional judgement in that, doesn’t it, yeah, now if that judgement is made, but you could not possibly have known all this, then we can live with that. [Participant A]

40. Now again sometimes where your information is incomplete you do have to rely upon your intuition, don’t you, in terms of professional judgement, and I think that’s what we were talking about before, whereby my own personal experience is that when I’ve gone against my gut instincts I’ve invariably been wrong, or could have done a better job. [Participant A]

2.5 EXPERIENCE

41. We do a lot of these, we’ve done a lot since, we’ve got a lot of success. [Participant K]

42. People live how they live, don’t they, but we go into enough addresses that are used by drug addicts, and more often than not drug addicts will keep their
curtains closed, and more often than not, drug addicts maybe don’t do their washing up, and they’ve got rubbish strewn all over the kitchen, and from what these guys saw when they did the little recce’s on the address, that’s what it looked like. [Participant J]

43. We do a lot of these warrants, it’s bread and butter for us, isn’t it, and it’s not an issue potentially, we weren’t as cautious and as worried about it, because it’s our bread and butter, isn’t it, might do a drugs warrant, so you can, if required, you could brief a drugs warrant in the car on the way to, right we’re going to go to this address, I’ll do the door, you go in first, we’re looking for him, you know you can do things on the go. [Participant K]

2.6 SPEED

44. It’s a gut feeling, the second, the second we got into the house, my gut feeling was that, I saw the bloke that was there, my gut feeling the second we got into the house is “oh my God, it’s either the wrong address or the people aren’t here anymore”, the second we got in. [Participant J]

45. When I got inside, it’s pretty instant, wrong address. [Participant K]

46. I knew the subjects that we were looking for at the warrant. The girl who was the main subject of the warrant, I know her personally, I’ve dealt with her a number of times, and I knew straight away that they were the wrong people. [Participant J]

47. Within minutes of us going in there in the first place, I’ve said, “wrong people, get out of the house”. [Participant J]

3. INTERPRETING PROCESS

3.1 DIALOGUE

48. I sort of I had to speak to a few people, but it was on like an informal basis, it was a meeting that I would have been at anyway, I spoke to one of the Superintendents about what we’d done, how, what had happened, and wrote, and then since then I’ve been liaising with Superintendents, writing reports and what we’d done and stuff. [Participant J]

49. The only involvement that I had that day was that I spoke to the Duty Inspector that day, about what was going to go into the newspaper, what input we were going to give into the bungling cops story, so that we had some sort of apology in there, and so that he was briefed, so that he knew what to say when the press rang. [Participant J]
3.2 RATIONALISING

50. But if you’re out, you’ve got to be out there, and if you put 20 doors in on drugs warrants, and you get all the acting to do, if you get one wrong, you get one wrong, if we stayed in the office, and hid behind our desks our whole careers we wouldn’t make any mistakes, because you don’t put yourself in a position to, if you don’t go out on the streets you’re not going to get assaulted are you, so I’m happy with what we did, and I’d do it again, and we have done it again, no mistakes. [Participant K]

51. …you can’t go in and say, just because there’s a young couple and a baby, you can’t say, well there’s no way that this can be linked to drugs, because unfortunately so many people out there will, with babies, will sell drugs. [Participant J]

52. Until we know exactly that it’s definitely the wrong address, we have to treat everything as if it was the right address, so that’s what we did. [Participant J]

53. I didn’t feel guilty at any point, because everything that we’d done was right, and I’ll stand by that, to my grave, everything we did was right. [Participant K]

54. The intelligence was right, we were right to put in both the doors, we were right to handcuff those people, and we did, I think we did everything by the book. [Participant K]

55. I wouldn’t say it went wrong, the warrant, the execution of the warrant was perfect, the entry into the address was quick, the address was secured quickly, two persons in the address who we did not know at that point were detained and handcuffed, as per you would on a drugs warrant, the warrant went well, it was unsuccessful in that no drugs were found, and that the occupants that we were after, and the subjects of that warrant weren’t there. The warrant was executed spot on, as it should be, text book, and I was very happy with how the warrant was executed, it was just an unsuccessful warrant. [Participant K]

56. But that has to be calculated by the fact that they’ve acted in a way that is reasonable, proportionate and responsible and within the law, so it’s not quite carte blanche, because if, you know, as long as you can demonstrate your thinking and your rationale, that’s fine, but if you’ve actually gone two and two and come back five, hmm, that’s not good, is it, that needs to be debriefed, understood, and responded to. [Participant A]

57. I don’t think that Steve gambled with our reputation, he did what he thought was the right thing, okay, in an ideal world he should have made some more checks, before he left the police station to execute the warrant, and that’s the learning for him, but he didn’t gamble with our reputation, and as I say he’s done many, many warrants and produced some excellent results. [Participant A]
58. Ultimately, going back to Steve’s position, at the time, of deciding to do that warrant, his belief was he was doing the right thing, at the time he went through that door, his belief was he was doing the right thing. [Participant F]

59. They don’t know the truth, do they, we can’t say to them, actually people who are paid to give the police information are telling us that, as far as they were aware, it was still the right address. [Participant J]

60. Steve is that active he will have done loads of these, loads and loads of them, on this occasion he got it wrong, so from my side of it is should I take Steve out in the back yard and shoot him for his mistake, no. Yes, he’s made a mistake, yes he will have learnt from it, and I know him well enough as an individual that he definitely will have learnt from it, because he was that upset by getting it wrong. [Participant F]

61. If Steve had been a sloppy individual who was renowned for continually making mistakes, then actually the response could have been different in terms of the outcome, it could have been, you know, this is it, you’ve gone a step too far now, there will be some form of sanction, whether that be a written warning or whatever. [Participant A]

62. If Steve had come up and said, look, I’m just too busy, I didn’t have the time to do this, or had been disingenuous in explaining what happened, then I think my reaction to him would have been different, around well actually you need to make the time because this is important. But he threw himself on his sword straight away, recognised the error he had made, and the seriousness of the error he had made. [Participant A]

63. Clearly it never occurred to him that the guy might have moved out, now you have to try and decipher for your own mind whether that was a reasonable assumption or not, or was that a reckless omission on his part. I guess we’ll never know the answer to that question. [Participant A]

64. But when people are working with the best of intentions with a heart felt motivation in terms of the right thing to do and they make a mistake then I think it’s the responsibility of the management to exercise discretion. And take the lessons learned from that and move on, rather than, if people have been reckless or gambled with our reputation I think that’s a different scenario and probably a different outcome for the officer. [Participant A]

65. Knowing the individuals, their punishment of themselves for getting it wrong will be probably far more than anything I could do to them, and was it right for us to have taken them through a discipline, or taken any form of sanction against them, when in actual fact, in the cold light of day what they’re trying to do is do their job to the best of their ability, and the pair of them normally do get it right. [Participant F]

66. But that’s an intuitive response, isn’t it, because strictly speaking there is a neglect of duty which could have resulted in more formal sanctions in terms of
misconduct, but you make a value judgement, don’t you, in terms of the individuals concerned, their personal reputations, their productivity, and how they do business, and recognising that they are 99.9% of the time highly effective people, you make that intuitive assessment. [Participant A]

67. If we’d been disproportionate in our response, in terms of how we managed Steve, why would people want to choose to take the path that he has in terms of his proactivity, they become risk averse, don’t they, in that climate of fear. [Participant A]

68. So if we start being seen to act against someone who’s made decisions for the right reasons, with the right intentions, although it was wrong, we would really start getting ourselves in trouble, in the fact that our police officers have to make decisions, today, everyday. [Participant F]

69. If we had been disproportionate in our response, then the risk is people will become risk averse, and be not prepared to go that extra mile, so Steve responded to the intelligence, got the warrant, and on this occasion went wrong, but on many, many other occasions it’s gone very, very well, and he’s got excellent results, yeah, now for someone who’s maybe sort of ambivalent, or sat on the fence, could say, Christ he took a risk there, he got it wrong, look what happened to him, why would I want to put myself in that situation. [Participant A]

70. If we were to be more draconian or authoritarian in our response, actually would you be prepared to take a risk or to put yourself out on a limb if you thought that if it went wrong for no fault of your own you’ll be in trouble. If you made the same mistakes time and time again then that obviously would be a different matter. [Participant A]

71. Because he is a high-performing individual, if you are recognised as being someone who is hard working, who works hard and tries hard and seeks to deliver, we all make mistakes, don’t we, and therefore in terms of valuing each other we won’t persecute people in a way that is not helpful, not constructive, or whatever. [Participant A]

4. INTEGRATING PROCESS

4.1 INVOLVEMENT

72. I was involved in the aftermath of it, and the fact that I knew nothing about it until it had happened, I knew when it had gone wrong, and to be honest my biggest involvement was sorting out the compensation for their door, which then became quite an issue. [Participant F]

73. A lot of the part of the beginning of it, we weren’t aware of, a lot of the intelligence coming in, the information that they got, the decision to actually expand that information, and the decision to execute that warrant, at that stage I was totally unaware of all this going on, as I’m sure the boss was, he didn’t
know, it's only when it had gone wrong for this one warrant out of however many that were going on that week came to light at whoops! [Participant F]

4.2 CONSENSUS

74. I had a conversation about this with John, the Superintendent, and that was the conclusion we came to independently but agreed. [Participant A]

75. John actually took a grip with this situation he briefed me what he was doing, then I agreed with his course of action. So there was that conversation, not written down but that was that conversation about how we would resolve it. [Participant A]

4.3 ACCOUNTABILITY

76. The Superintendent became involved, and he and I spoke and our approach was we've just got to say sorry, and accept we got it wrong, do what we can for the family, and move on. [Participant A]

77. We've got it wrong, we're sorry, we get it more times right than we get it wrong, and offered the apology, being empathetic towards the people as well as offer reassurance to the broader community. [Participant A]

78. This isn't me passing blame, because it's still the organisation's fault, it doesn't matter whether it's Steve's fault, whether it's my fault, whether it's the intelligence unit's fault, it's still the organisation's fault. [Participant J]

79. But we can't, we can't, in the press all we can do is say we apologise, we made a mistake, we can't say, actually, and reveal our tactics of how we do things, we have to just hold our hands up and say we made a mistake, which essentially we did, even though we did the right thing. [Participant J]

80. At the end of the day we got it wrong, put our hands up and accept we got it wrong. [Participant F]

81. It's a genuine honest unfortunate error, it is a bad word, but that's what it was. [Participant K]

82. Intuitively the right thing to do was just say, we're really, really sorry, we got it wrong, we'll do what we can to put it right. [Participant A]

83. Sadly on a very few occasions we do get it wrong. Sometimes that's human error, sometimes that's just sloppiness and not checking the information. [Participant A]

84. I think that, in this particular case, it was just as much a systemic failure as it was an individual failure. [Participant A]
85. So ideally before going out to execute the warrant they would have done last minute checks just to check who was living in the house, and that didn’t happen. So to my mind I would categorise that just as much as about a systems failure, as it was the failure of any individual. [Participant A]

86. Okay we get it wrong, and to be able to sit there, internally and externally and say I’m sorry I got that wrong, this is what I was thinking about at the time. This particular instance, there’s very little we can say, okay, yes we weren’t under any time pressure, yes there was something historically here that probably justified the warrant, and any action the police officers took, why didn’t we make those checks immediately before, etcetera, before we actually did the warrant, unfortunately we didn’t. [Participant F]

87. The bottom line is we made a mistake, and we needed to do something to put that mistake back, and therefore I was disappointed that when I read that article we hadn’t put more into it in terms of acknowledging the mistake. [Participant A]

88. We were engaged locally with it, with John and myself, but the point is if it doesn’t feel like it’s being done spontaneously, sometimes it doesn’t carry the same weight, so we were coming along 24 hours after the event, ideally when that article was published, it should have been Superintendent John, or Chief Superintendent David, or Chief Inspector Robert said, we got it wrong, we’re really, really sorry. [Participant A]

4.4 EMPOWERING

89. We encourage our officers to be proactive, and if they get good intelligence which they believe to be accurate, then to action that intelligence, and if that means go and get a drugs warrant and go out and execute the warrant, do it. [Participant A]

90. We empower and entrust our people to do that, yeah, which I think is the right thing to do, and when you’ve got a highly motivated individual, such as Steve, who’s got a good track record, you want, you encourage your people to be successful, so there is this delegation and it really is empowerment, trusting our people to go and do a good job. [Participant A]

91. Part of my response was, okay we’ll learn from this, but come on Steve, you’re a good guy, you’ve made a mistake, you learn from it, move on. [Participant A]

92. They knew they’d done wrong, but it was just as much about building them up and encouraging them to respond to it, so they take the learning but move on, rather than just dwell on the mistake. [Participant A]

93. Errors such as that are important in that we need to learn from them, and Steve gave me every reason to believe that it had been a hard won lesson for him, in terms of where he was with that emotionally, and I think it was that that made me realise, okay we acknowledged the error, but now you’ve got to pick yourself up
and carry on, and carry on doing the good things, because you are valued and
you’re a good member of staff. [Participant A]

94. If you look at our values, one is about respect, another’s about trust, and we talk
about, in our values we give examples of what that, because I think it’s easy, you
may take respect to mean one thing I may take it to mean another, trust. So we
went a step further when we built our values where we also gave examples of
what we believe those values stand for, so trust, having faith in each other, and
the behaviours, empowering individuals to deliver, so we trusted Steve to do that.
Giving people space to grow and take risks, well we gave them that space, and on
this occasion he got it wrong, but that didn’t necessarily mean that he lost our
trust, the message was learn from it and move on. [Participant A]

95. I mean we want our staff to be innovative, to have flare, to be proactive and to
work in support of their communities and protect people from harm. And from
time to time sadly we will make mistakes. It’s important that if people do make
mistakes and they honestly made mistakes that we learn from them and we move
on. [Participant A]

96. So I think that we can’t, if we had a climate of fear and a risk averse culture, I
think that would be a bad place to be, and we have to encourage and support our
people in making challenging and difficult decisions. [Participant A]

4.5 REPUTATION

97. Actually this particular team are a high performing team, who have been very
successful, one officer in particular, Steve, very motivated, really, really good
cop, and he goes out and on this occasion got it wrong. [Participant A]

98. As far as I’m aware it was the first time for Steve that he’d got it wrong, and as I
say that was more about a systemic failure than Steve being a bad cop.
[Participant A]

99. I mean Steve is, and both of them actually are very good officers. [Participant F]

100. So for me it is very much coming back to the values, because I mean I think,
in terms of our culture, who are our heroes, who do we tell the stories of, so
Steve would very much be in that category of being one of our heroes, because
he is proactive, he is effective, he is capable, and he gets results, and so by
putting him forward as being one of our heroes, you would encourage other
people to emulate his successes. [Participant A]

101. I think we all have personal reputations, don’t we? And I think that either
consciously or subconsciously that will play a factor in terms of how you
respond. So if you’ve got an officer who is known to be hard working, who is
known to be industrious, who is known to be very proactive and committed then I
think that your natural bias will be to be in support of that individual. Perversely
if you’ve got an officer who is not known for their productivity, not known for
their competence I think that would intuitively provoke a different emotional
response in terms of how you manage with that incident. So like it or not we all have personal reputations which go with us. Whether that’s fair who knows. But that’s the fact of life. [Participant A]

102. Quite rightly so, a young couple with a baby, cops burst in, they’re handcuffed, and then the realisation we’ve got it wrong, so it is hugely damaging, it’s huge, it is impactive, and it’s not a good place to be, and somehow we need to recover that in terms of regaining people’s trust and confidence, and of course they will tell their family, they told their story in the newspaper, everyone who bought The Advertiser knew about it, and it was on the local radio as well, so things like that can dent public confidence. [Participant A]

103. I think there’s always, with this sort of incident you always have an issue that we can upset the confidence of the public, and whenever we have bad press of any sort there’s always, it will always impact upon the confidence of the public. [Participant F]

104. Well it is nerves, because obviously it’s damaging to your reputation. We were front page of the paper the next day, not the fact that we had a drug dealer in within an hour after that. [Participant K]

105. I think, just on one day in the town centre we stop-checked like 80 people who are known to the police, we did some really, really good PR, positive neighbourhood policing team work, that week, and the only thing that anybody in the community found out about is the warrant that went wrong, that hit the front page of the newspaper, it had massive implications, confidence in the police, everyone’s thinking what a bunch of idiots, the police have gone through the wrong door. [Participant J]

106. Yeah it was negative because if you read the front page of the press, that said, police went through the wrong door, that’s what you believe, the police didn’t go through the wrong door. [Participant K]

POST-DECISION PROCESSES

1. REFLECTING

107. Therefore thankfully this is one of those once in a blue moon events, as opposed to something, if it happened all the time I would be really, really anxious, and we would be putting in place more stringent checks and balances before people went out executing warrants. [Participant A]

108. I think that we could, and should have done more at the point of impact in terms of recovering the situation. [Participant A]

109. Will we make mistakes about warrants in the future, yes we will, in an ideal world of course we wouldn’t, of course we’d get it right, but unfortunately this sort of thing will happen again, I have no doubt. [Participant F]
110. If someone says black is black, maybe we should question that, and we should have questioned that this, three people are operating from this address, she lives at this address, well does she, we haven’t questioned what the intelligence unit have said to us, we haven’t questioned what our system has said, maybe we should have. [Participant K]

111. The checks and balances, in an ideal world, should have been done, before it went to the warrant, and it didn’t happen... Steve would have done more checks and realised that the person he was looking for had moved out of the property, and therefore we wouldn’t have executed the warrant. [Participant A]

112. We’ve said, just tell us a handful of addresses, and we’ll carry out warrants at all of them, maybe rightly or wrongly we assumed that the intelligence unit, prior to giving us a pack of information, saying right this is for this address, this is for this address, had carried out those checks, so we didn’t carry them out ourselves, maybe it was because of the amount of them that we had that it would have been too time consuming to carry out all of the checks. [Participant J]

113. The thing that I find difficult to justify is we had plenty of time to look at it and get it right. [Participant F]

114. The information as far as we know was accurate and correct, but we executed the warrant too late, during that period of time these people moved away. [Participant F]

115. In actual fact, if we had done that days earlier it would have been the right warrant in the right place at the right time, because we had that delay it was totally wrong. [Participant F]

116. So I think the learning and the values pieces around people who work hard and try hard are valued, trusted and respected, and if you make a mistake, that’s very regrettable but we need to learn from it and move on. [Participant A]

117. At the right address, where everything was right, it was still a mistake, because there were a few checks that went undone, and potentially we could have avoided going through that door on the morning that we did. [Participant J]

118. In that time, basically the people who were dealing drugs had moved out of the address, obviously we didn’t know they’d moved out, which is where the last minute checks would have been great, and then the new family moved in, and obviously then we executed the warrant with the new family having moved in, you know, yes, I can see how it happened, I can see how we could have avoided it. [Participant F]

119. So I think it was right and proper that we supported them with the caveat that we take the lessons learned and we move on. [Participant A]

120. Although I’ll stand by what we did, I think we did enough, and it was unfortunate. [Participant K]
121. Because there were so many of them, and this is why I think the error came. [Participant J]

2. LEARNING

122. So we, within the organisation, I think there is an element of yes, we have to learn as individuals within the organisation, and make sure that we put the systems in place to try and prevent it happening again. [Participant F]

123. No I wouldn’t say we’ve sort of reformulated the way we do our business, no we haven’t. Is virtually everyone within the BCU aware of this incident, yes they are. Is there an element of making sure that before a warrant is signed off, it should go through an inspector who verifies the information is there. So there are instructions issued around making sure that we got the information was up-to-date and relevant, and so before you sign this, you can go and apply for this warrant, is this information current, and relevant. [Participant F]

124. So it becomes a common sense point, which if you’re going to execute a warrant, you need to actually make sure that it’s current. [Participant F]

125. So there’s an element, two sides of that I would say, there’s the learning which is a bit of an instruction around, before we sign warrants inspectors make sure you’ve got the information right, it’s current, it’s up-to-date, and we did that sort of instruction level, but then there’s a, I suppose a level of understanding within the organisation that wasn’t hammered home, but I’m confident there is a slightly unusual form of learning, if that makes sense. [Participant F]

126. Well we have made it clear to our staff that if you are going to do warrants you need to make absolutely certain you know who lives at that address. Because we don’t want to repeat this mistake in the future. [Participant A]

127. I would say that the learning for me is that, as a supervisor I won’t, I won’t let the warrants be done without the checks now. [Participant J]

128. But you know, it’s not necessarily down to the individual officers, it’s maybe for me to liaise with the intelligence unit, find out what checks have been done, etcetera, and yeah, the learning for me is massive that we check everything before we go in, because maybe for me it’s had more impact on me, because I’m the one who’s had to write all the reports, and go to all the meetings and stuff like that. [Participant J]

129. Potentially if you have time to do every single possible check that you can on the address. [Participant K]

130. Don’t take the press with you! [Participant K]

131. [the press] can’t be trusted. [Participant K]
132. Completely back stabbed us in this case, and the people of the press are very, very disappointed about that, because we used to take them on a lot of stuff, and we used to give them loads of really good stories, and they almost ruined a little bit of a relationship with us now, because we're too nervous to take them with us as a result of what happened on that. [Participant J]

133. It's not the best move, didn't do that, and we'll do our checks next time. [Participant J]

134. Never again will I invite the press to come along on a warrant with us, if we go to a warrant and it's positive, I will then get out my phone and ring the press, and say come and have a look at this, but never again will I invite them to come along. [Participant J]

135. What I would say is yes, this is a very well known incident, in around people within this division who are executing warrants, not all of them are, as I said, are as conscientious or as good as Steve, but all of them will be very well aware of the repercussions this had for the organisation, and would seek to avoid what's happened with this. [Participant F]

136. My view with that would be our responsibility of the management is to, okay you may be too honest, but what are you doing to make sure we don't make the same mistake again. That's the learning for me, and so I'm sure that that will have dawned on Steve now that before he goes out, just make that last check. [Participant A]

137. This sort of incident flies around the BCU, everybody knows about this, because we've got it wrong, it's embarrassing, people don't like to be involved in it, and everybody learns from it, and this flew round the BCU like wildfire. [Participant F]
1. INITIATING PROCESS

1.1 INTERNAL DRIVERS

1. There was a series of these conferences. This particular event should have been done in conjunction with HR, but unfortunately that liaison did not effectively take place. [Participant P]

2. Advance in their enthusiasm rushed ahead and came up with lots of things and publicised things before they had talked to us about that, and that was a problem, and that partly led to the problem that we got. [Participant P]

3. I think they just got carried away with themselves, and forgot, I think, to check in, because they also forgot to check with us about the budget, they’re supposed to apply for the budget before spending money, so there’s another example there, where they’d, in their enthusiasm, got carried away. [Participant P]

4. The first I knew of this, sort of live issue, was seeing through my own email system, or somebody showing me. It had been publicised across the Force, the programme for the day, and that was the first I knew of, that this, what the programme was. It was issued very late in the day, it was a very poor piece of paper really, it wasn’t a proper programme, I think they were in a bit of rush, and that was the first I’d heard of it, and it had then gone Force-wide. [Participant P]

5. I mean my PA put it in front of me because she was horrified, she said you need to look at this. [Participant P]

6. Well you see, right, my memory is that it was towards the end of a week that this thing came across my desk and I thought, oh no, oh dear, as it were, and put those things in motion. [Participant P]

7. In a way we kind of gave them quite a bit of free rein about getting themselves going, and a bit of self determination, although I would say, within that, we were already beginning to feel like some of that freedom, sometimes meant they were kind of doing things that perhaps hadn’t been properly thought through, or the consequences hadn’t been properly thought through, or sometimes crossing over with other people. [Participant P]

2. INTUITING PROCESS

2.1 EXPERIENCE

8. I think sat upon the fact that I know, I know obviously from personal experience, and I’m very involved, throughout my career in the issues of female police
officers, they are very much alive... so in that sense yeah, I was basing that on experience, and previous experience along the years. [Participant O]

9. It was, kind of had two sorts of intuition there, because for me I felt, from my own professional background it's really important that we do this kind of thing, it's really important that female staff understand this kind of thing, yes we might be taking a risk around it, but we ought to be doing it. [Participant O]

2.2 GUT FEEL

10. I was horrified, I was horrified, and I said oh no, and I hit my forehead like you do, and I said that's awful, that's an honest... that was my gut reaction, oh no, we shot ourselves in the foot, when I saw the bit that said about having your colour profiles done, I was quite dismayed at the general layout of the thing, but I immediately spotted that particular thing, and just the way the whole programme was set out, in my view was not appropriate, and I felt embarrassed about it, if I'm honest. [Participant P]

11. ... so I just felt, on those grounds, and my instincts told me that this was going to create adverse publicity and give it a bad name. [Participant P]

12. Anyhow she had an anxiety about this one particular session on colours, and about how it might come across, that we'd be seen as what on earth are police doing working out what colour suits them, just get on and do some policing kind of thing, in terms of how they come across maybe in the press, or in the public eye. [Participant O]

13. She had real anxiety about it, and it transpires she was right, but a couple of others shared her anxiety. [Participant O]

14. Yes. Yeah, they just, well they saw it in a different way, they saw how it could be perceived, and they were uncomfortable with it. [Participant O]

3. INTERPRETING PROCESS

3.1 DIALOGUE

15. Because that was my reaction, and I was feeding that back, and taking that up, I think I asked somebody to take that, that's right, my Head of Pay Policy and Performance, I said to her, look at this, this isn't right, because it's her job to co-ordinate and work with those staff at the group, she absolutely agreed with me, she was going to go away and talk to Mary about it. [Participant P]

16. I spoke to my Head of Pay Policy and Performance, and then shortly after that, because the person that I was mentioning that is in my team, that also sits on the Advance Board, and she was on leave, and so when she came back from leave a few days later I sat her down and said, what, how, what involvement had she had in this, had she seen it, and that was when I learnt that she'd not been able to go
to that meeting, and she was as disappointed as I was that that had gone ahead, and had she been at the meeting she’d have cautioned them to sort of not put it out in that way. [Participant P]

17. So I remember talking to some of my immediate people and then within a few days of that it was briefly mentioned at our chief officers meeting the first time, which is probably, I guess Lorraine would remember that, it’s probably the first time it had come across her radar. [Participant P]

18. I remember we spoke about it on the Monday at chief officers’, and I said to them, I’m really concerned that this isn’t the right thing, and I’m taking this up with Mary. [Participant P]

19. Something had come up under the press element that prompted us to talk about it, and I remember saying I have some concerns about this, particularly that colour thing, I don’t think that’s a helpful thing, and I’ve asked my people to go and talk to them about it. [Participant P]

20. This was just mentioned in passing really, I mean it was over in a few minutes, it wasn’t an agenda item even, it was just a, it had come up, I think, we get some regular reports from the communications people, and I think there was something in their little reports that prompted us to mention it. [Participant P]

21. Well bearing in mind there was very little discussion at the senior team, and all it was left with there was that I was concerned about it, and that I would ask my head of PPP to speak to Mary, but at that point it seemed as if the thing was a done deal, and it was more about giving feedback for the future, than having to do something. [Participant P]

22. I think that was probably just less than a fortnight before the event. Yes, that was the Monday, I said to Chief, but that was before I realised we were going to hit the national press, that I wouldn’t be surprised if we got some adverse publicity about it, and then by the middle of that week, the Wednesday, which I think is only a week or ten days before the actual event, all that adverse publicity hit us. [Participant P]

23. The Chief Constable didn’t really express a view, because he said, what do people think, Kai’en and Tom were very clear to say, we don’t think this should go ahead, this will be seen as the wrong thing to be associated with for [POB], it will be seen as just vanity and frippery and nonsense, and what on earth are we doing that for, kind of thing. [Participant O]

24. Well it was my view that it was a good thing to do, that it would be a good thing to support. We were discussing it in terms of whether we should support and allow this to happen, it was the week before, so should this go ahead, and it was my view that it should. [Participant O]
3.2 RATIONALISING

25. I absolutely see why women police officers need to feel that they can be women, and not dress like men, not be men, actually be a woman and be successful and be in the police. You don’t have to kind of just turn yourself into a bloke. [Participant O]

26. So I said no, this is really important that they should do this, it’s very important that they should, but it’s not about oh do I look, does my bum look big in this, it’s actually do I present well, do I look professional, do I feel competent and confident, so I said let it run. [Participant O]

27. I know that how people present, especially when you’re looking to go into some areas of policing like the CID, which is very under-represented by women, the culture is very strong around having to conform, and there are lots of great people who are looking to break that. But the reality is that when you’re looking at it from the outside in, you see people, largely white people, largely male people, looking like a certain way, and actually that’s not the only way to succeed. It was about trying to kind of challenge those stereotypes. [Participant O]

28. It’s really around presentation, when you’re not in your uniform, and of course that’s very much linked to self confidence, you have a sense of how you feel, and of course in a male dominated environment that’s really important. So it was about how they project, how they present in the work place. [Participant O]

29. Because I feel really strongly, and felt really strongly about women being women in policing, and not turning into men, and this is one way of helping them feel empowered to do that, and I am the only female police officer in the chief officer team, there aren’t many very senior police officer women in the country, and so I do kind of speak up on these things, and that’s the reason. [Participant O]

30. I thought it was inappropriate, it didn’t look professional, it didn’t make the connections between, it could have potentially made some connection, but it didn’t attempt to make the connections between work and having your colours done, it looked like a jolly, and I think that creates a bad reputation, poor reputation for those sorts of events where they are about supporting women at work. [Participant P]

31. That was how I felt about it, I know when we got to chief officers at that point there was a kind of, well is this so terrible, having people having their colours done, and I could probably have lived with it, if it had been explained as part of helping women be more confident to present themselves in formal meetings or something. I think I personally would still have thought that was not the right thing to do, because I think that’s a personal thing, not a work thing. [Participant P]

32. But in my mind it was perfectly appropriate to do something around women’s health, but to bill that as gynaecology, and it was the way it was presented, and it wasn’t presented as professional. It didn’t give the reasons why those things
would be appropriate and relevant to talk about in the workplace, it wasn’t connected to the workplace enough, it was too much about, it was straying across, for me, a personal/professional boundary there. [Participant P]

33. I mean I would have preferred not to have had a colour session, but even I could have lived with having a colour session that was probably, properly positioned and described as, and relevant to, or in some way I could even have lived with that, even though my preference would have been for it not to have been in there. [Participant P]

34. No, I thought having a talk on gynaecology might be a bit of an issue, and it, for me, I think I would draw the line, I would say that it’s not appropriate as part of a professional work conference to have your colours done, you know what I mean by that, don’t you? I mean somebody give you some advice on what colour suits your skin etcetera, that feels to me like that’s a personal thing, not a work thing. [Participant P]

35. As a female professional I was embarrassed, as the HR Director, I could see that we hadn’t followed proper protocols, that this wasn’t properly positioned as an event, and as a diversity self support group, which we have some responsibility for supporting, and we were providing the money for. [Participant P]

36. They were important for me as a woman in the organisation, and I felt embarrassed, and almost to the point where I felt it was difficult to put my name to support Advance, if they were going to show us up like that, if I can explain it like that. [Participant P]

4. INTEGRATING PROCESS

4.1 CONFLICT

37. …and then Karen said, this will be seen wrongly, and this will be portrayed wrongly, I’m not saying I don’t agree with you, this will be portrayed wrongly and therefore it will damage us. [Participant O]

38. It didn’t get a lot of airing, but if my memory serves, I think there was sort of, Lorraine and James were sort of looking a bit quizzical as to why I was concerned about the issue, bearing in mind at this point it hadn’t created any kind of furore. [Participant P]

39. There was a little bit of, I don’t see what the problem with that is, from Lorraine, and possibly from James as well, I think, but that was to my mind that was kind of a bit of difference of view there, and that was where it was left, and at that point it didn’t matter so much, because it, we didn’t know it was going to blow up so badly. [Participant P]

40. I think the Chief came in, as he often does, and kind of gave a sort of balanced view, but agreed with me that it didn’t look good, hadn’t been done as well as it
could be, and it didn’t give itself a good press, a good airing, I can’t remember what other people said at the meeting, if I’m honest. I remember Lorraine and James being sort of probably on the side of saying there’s no harm in it, I think the Chief was probably a bit more with me, but being a bit sort of balanced, and not wanting, I think that’s right, he summed up about not wanting to discourage Mary and Advance, not to be too hard on them, which was fair enough. [Participant P]

4.2 GENERATING OPTIONS

41. In fact Mary said that to me, shall we cancel the whole day, and I said, well really wouldn’t want to do that, at this stage, but I think that would have been an over-reaction to media criticism, and the Wellbeing Day has a valid part to play, that we are keen to support and encourage Advance, and the work that it’s doing, so it would, to have cancelled their day would have been quite a negative step, I didn’t think the situation warranted that really. [Participant P]

42. We did discuss whether we should cancel the whole event, but felt that was going a bit far and we didn’t need to do that, and we’d followed through that media strategy, and it did have absolutely the right response, I think. [Participant P]

43. Well we considered pulling the event altogether, we considered removing two of those things. In the end we decided only to remove one of those things, so no, I think we did think through quite a few, those were the options, we did think through those. We did consider cancelling the whole day. [Participant P]

44. I didn’t seriously consider pulling the whole event for any length of time, although that was an option we briefly considered, it was more about the fact that I didn’t want, that would have seemed quite a drastic step and I didn’t want to cause sort of damage and withdraw something, that would seem quite a drastic step really, so that wasn’t a serious consideration, although we did look at it quickly as an option. [Participant P]

4.3 INFLUENCING

45. I managed to convince my colleagues to go with it, whereas actually their feeling is the right one. [Participant O]

46. At the time they were persuaded by my kind of contrary argument really, but they were, they understood why Mary suggested it, they understood the motivation being a right motivation once we talked about it, but they were concerned about how it would be perceived. [Participant O]

47. So I explained why it was important, that it wasn’t just about frippery, it was really, it was about presentation and confidence, and they said, oh right’o, and they got it, they understood where I was coming from, and they said, in that case, fine, but they, their disquiet was very real for them, and as it was they were right, and I was wrong in terms of how it was received. [Participant O]
4.4 REPUTATION

48. I just thought that was an ‘ouch’ factor within the force. Of course the next thing that happened is that in very short order, which happens to us quite a lot, this got into the media, so the next thing I knew is I had the Head of Media Communications coming up and showing me some really damaging publicity, national publicity, about this, and as the press does, kind of twisting it in the worst possible way, but kind of, I don’t know if I’ve got it to hand, but kind of women sort of having a jolly really, and a freebie, and having their colours done at the expense, and what relevance was that to the policing on the streets, and just all the worst things. [Participant P]

49. And then it went in the national press, no it went in the national press before the event. Yeah, it went in the national press before, so we pulled it before the event took place. But the damage was done. [Participant O]

50. Anyway big mistake, national press, horrendous, and so it got in the national press, we don’t know how. I mean we know that everything internal is leaked in an organisation, but anyhow it got into the press, and it was portrayed exactly as Karen had thought that the police are out there wondering about what colour of eyeliner to wear, and what on earth are they doing, it’s all nonsense, in the Daily Mail, kind of Daily Express view of the world, sadly. [Participant O]

51. It made national press over a couple of days in the newspapers, and it was things like, women police choosing which colour scarf to wear, which was, it was really having a go at us around why aren’t you out there catching burglars, why aren’t you, why have you got time to do this, the age old criticism that comes our way. So those are the kind of comments, and of course what that then focused on was all the negative bits about women in policing, about how they’re all swanning about being airy-fairy and not actually getting on with it, so it kind of, it back-fired really. [Participant O]

52. The concern had been more about what was in the public domain. [Participant P]

53. So I was quite clear I wanted it to go ahead, and then it was more about damage limitation, making the best of it, and trying to, the priority became damping down the media furor, which was getting out of hand, and people were getting, misunderstanding and misinterpreting everything, in an exaggerated sort of way. [Participant P]

54. It was a question of wisdom, of whether it was the right thing to be seen to be doing, it was about perception, which in our world is very important. [Participant O]

55. Actually there wasn’t anything wrong at all in what was being proposed, it was very sensible for very sensible reasons, but it was the risk of our reputation, it was the risk about how it would be taken, and it was taken out of context, and it did damage us, only for a couple of days, people soon forget. [Participant O]
56. Because reputation is all for us, policing is so much about reputation, not for its own sake, but there's a really strong evidence, we know, that if people have trust in their police, they have confidence in their own community, they see that, they feel good about their local police they feel good about where they live, and if they feel good about where they live, then they feel much more empowered to solve their own problems. [Participant O]

57. So our reputation is really important in order to make people feel safe. Have the real, there's a link between the perception and policing, and so we guard that reputation really, really carefully, and sometimes we have to burn it, we know that we take the hit for things that are nothing to do with us, for the greater good, that's what happens in a democracy, that's fine, and we take that hit with our eyes open, but this was an own goal really that we didn't need to score against ourselves. [Participant O]

58. I know we caused embarrassment to Mary, who is a fantastic senior leader, and we caused her embarrassment, for her to be in the national press like that is really poor, and I know that would hurt her as an individual. [Participant O]

59. So yeah, people were hurt by that, because a lot of people had put a lot of work into it, for a start, I think people were embarrassed, because nobody likes a scene, and they were [POB], and it was a ridiculous thing, that was the, what on earth are they playing at down there, kind of attitude in the national press, so nobody liked that, and lots of people felt that embarrassment throughout the organisation. [Participant O]

4.5 CONSULTING

60. So at that point his [Head of Media Communications] advice to me was, what was our immediate strategy, his advice to me was, we should remove the colour thing, and say, look because there were all sorts of blogs going on by then, and people saying this is terrible and disgraceful, and getting carried away, we should remove the colour thing, and possibly the gynaecology thing, because that had also received some adverse publicity... and that, actually that proved to be an excellent strategy, it, the press problem died down... we got some, actually in the context, quite positive reporting, that we'd reflected on the comments that we'd had and decided that wasn't the appropriate use of tax payers' money type of thing. [Participant P]

61. I was given the advice about how to get the media storm dying down, and I took that advice which was to agree that we would remove the colour session, and that we would write, we'd produce a press statement sort of saying that in response to public opinion, as it were, we'd thought better of it, and that, we defended ourselves, but we did say, on this occasion, in view of public comments, we've decided to withdraw that particular session. [Participant P]

62. So I spoke to her on the phone, and we talked about how best she might do that, and I emailed her some, I got this advice, some ideas and some advice through
from the Head of Communications, and I emailed that through to her. [Participant P]

4.6 COMMUNICATING

63. So anyway, we made national press over a couple of days, and we pulled it, we pulled that particular part of the event, and we had to do some kind of putting plasters over the wounds, and put some press statements out and explain. [Participant O]

64. I think we then had to spend a lot of time sorting it out, mopping it up, doing that communication, doing the press statements, we just had to do a lot of reparation, which we could have done without. [Participant O]

65. That media strategy, I mean we deployed that within 24 hours, you've got to be very fast on these things. [Participant P]

66. We put out a press statement, very quickly, along the lines, like I said, of sort of positively about why we are supporting Health and Wellbeing Day, and how appropriate it is for us to be doing that for women at work, but in view of public comments and opinion we would withdraw the colour session. We made some points about it wasn't a great waste of tax-payers' money, but in the light of comments we would withdraw that session. [Participant P]

67. The police officers, the police or colleagues who were officers and staff who were involved in it were really hurt actually, because they genuinely didn't see what they were doing was wrong, and they weren't doing anything wrong, and so it was really difficult to try and explain, and Karen and Mary led on this, try and explain to colleagues why we're stopping doing something, when we also agree there's nothing wrong with it. [Participant O]

68. So I think the key, which Karen was very careful about, was to explain, to at least explain why we were doing what we were doing, and people can take their own ending from that. [Participant O]

69. What I did was I asked the Head of Communications to produce some advice for Mary, who is the Head of Advance, for her to communicate it internally. [Participant P]

70. But we didn't feel a Force-wide email was the right thing to do, so I left it to her to communicate to her members the outcome of that, in the best way she saw fit. [Participant P]
POST-DECISION PROCESSES

1. REFLECTING

71. Well we can have, we have close enough links through our own media team to have an off the record conversation, we could have done that to see, and if this was out there what would you think kind of thing, we could have done that, and we didn’t, so I suppose we didn’t make as informed a view as we could have done. [Participant O]

72. Kind of what I’ve hinted at already, about taking more time, being aware of how vulnerable we are, I knew it anyway, but it reinforced how vulnerable we are. [Participant O]

73. It was my judgement that wasn’t appropriate to stop it at that point, and it was more about learning the lessons and giving feedback and making sure in the future we prevented that kind of thing. [Participant P]

74. I mean it was a lesson, it was a lesson for me. And Karen and I have talked about it, her view is that she should have been more forceful with her view, because they were convinced by me, and actually she said “I still felt it was wrong”, and to come forward and say so really. [Participant O]

75. If it had been in the right place at the right time that would never have gone out in the way that it did, and caused the problem that it did. [Participant P]

76. The consequences were we made a decision too quickly. [Participant O]

77. So it was about, the learning was really about avoiding this in the future, and I think the learning for me was also about what seemed at the time a slightly bold media strategy – which, I know, on the day, when I mentioned it to James, he sort of didn’t, it wouldn’t have been his choice as a strategy – paid off. So I think that there is a moment, I don’t think I’ve ever quite done that before, there are occasions where you roll over and say, yep, you’re right, and we’re going to change in response, and that went down very well. [Participant P]

78. I think, I mean I think we were damned if we did it and damned if we didn’t actually, for it to have been leaked in the first place, some staff must have been uncomfortable with it, otherwise they wouldn’t have leaked it, so by pulling it we pleased some, and by also pulling it we displeased others. [Participant O]

2. LEARNING

79. Like I said, something like the Black Police Association, the Christian Police Association, all the different groupings that represent different minorities and diverse groups we fund them, it’s a very small amount, a few hundred pounds just to do admin and run a couple of events, that kind of thing, and they entirely have their own governance, they’re entirely down to themselves. But when they’re doing things in the name of [POB], then we need to just check in and
Karen put a system in place, about why we check in with what they’re doing and make sure it sits with our values, and is seen to sit with our values. [Participant O]

80. Well procedures might be overstating it, but I have made it very clear to the Head of Advance that I would wish her to work with HR and to give us advance sight of drafts of conferences and proposed content of conferences before they go out. And I’ve also asked my Head of PPP to make sure there’s more proactive communication about that, so my expectation is that there wouldn’t be a repeat of that, and that there would be an opportunity to review the content of future conferences before an ill considered and ill worded email goes out across the Force. [Participant P]

81. It was only when the media storm blew up that we had to take sort of further action, and you know, part of the result of that has been an agreement that those agendas for conferences will be shared and checked with us, as it were, before they’re publicised, as indeed requiring, requesting a budget, because after the event, or about a day before the event, we got a bill for over £2000 which hadn’t been properly requested. [Participant P]

82. And the upshot was to make sure that, they’re entirely free to do what they like, but they do do things in our name, and we need to get that, just have that checking sometimes, that we’re happy. [Participant O]

83. It’s a mistake, we make sure we don’t repeat the mistake, we learn from it, and we put in place the things that mean we don’t make the same mistake again. [Participant P]

84. Well I learnt that my instincts were right on this occasion, so I sort of feel sort of affirmed in that. [Participant P]

85. But one thing that would have been helpful, with hindsight, and we’ll make sure happens again, is that any kind of event like that is just run through, we have a health and wellbeing bunch, there are people there who can just check. [Participant O]

86. I mean I’ve reflected since, and Karen and I have spoken, would I have done anything differently? I think I might have looked, well I would, I hope if it ever comes up again I’d know anyway, but in a similar circumstance there are two things, one is just to hell with it, and do it anyway, because if we worry about everything that people said about us, we might not do anything, so part of it is to say well, crack on anyway and risk it. But the other side, we would have done a little bit of testing out, we could have done some testing out with local media and, because they might have already known, someone might have already told them by then, there’s all sorts of ways that they find things out. [Participant O]

87. We would have had this conversation to the press, we would have probably spoken to the Police Federation, perhaps Unison to say what’s your feeling on this, we’d have tested the water in a proper way, rather than just the few of us
round the table, so done some proper, quickly, we could do it quickly, doesn’t have to take forever, just test that water, and use other stakeholder’s views in terms of making a decision. It would have been a better informed decision. [Participant O]

88. I think the greater learning is just to take a bit of, when you’ve got time, as we did, we had a couple of days, to take that time. [Participant O]

89. We should make sure in the future we took a bit more time in considering how these things were put across in publicity information. [Participant P]

90. I think the learning really is about making sure we get in early, that we work alongside these diverse support groups, so we prevent shooting out, because it could have been so easily avoided, without really necessarily changing anything very much. [Participant P]
Intuitive Miss Case 3

1. INITIATING PROCESS

1.1 EXTERNAL DRIVERS

1. In [.....] in the police survey, which is a national survey about confidence, the confidence of [.....] residents in the police and the Council to deal with issues like anti-social behaviour is virtually the bottom of the country, and if we are allowing ourselves not to attend meetings, and the local Councillor is going to stand up and say “you’re absolutely rubbish”, then that’s not going to raise confidence in terms of what the public think about us. [Participant W]

2. When there’s a Councillor who’s kind of standing up saying, “it’s absolutely disgraceful, the police in this area are rubbish, because they can’t even turn up to a public meeting”, that does tremendous harm to the views of the public of the police in that area. [Participant W]

1.2 INTERNAL DRIVERS

3. The individual concerned also had an assessment on her ability to manage crime enquiries, and it came out very negatively. [Participant W]

4. It was a relatively quick decision, which was prompted by the assessment of their management of crime, I think that’s what, where the conversation first came about. [Participant W]

5. One of the areas was what we call a hot spot for crime, in terms of we had very high crime levels, high levels of anti-social behaviour and there was a perceived lack of the local police getting hold of the problem, and doing something about it, just a general feeling that the sort of Inspector level in the area was very committed, and was doing or trying to do their best job possible, but then they weren’t necessarily being fully supported by one of their Sergeants, who was sort of sat underneath them. [Participant W]

6. In the other instance there was one of the police scenarios whereby a quite important area in terms of a local Councillor who has actually got the community safety portfolio lead for the whole of the county, had actually turned up at a public meeting, two public meetings, and the local police hadn’t turned up, when they should have been there, and it was kind of like, well why has that happened, there’s obviously a breakdown here. [Participant W]

7. But there was a number of issues that were starting to be flagged up with the Local Area Commanders on the South as well, why didn’t we attend this meeting, did we not know about it, you know, it’s not acceptable, and then there was another one we didn’t attend, and it was like well, you know that you’re under the spotlight, you know we’ve got these meetings and we’re still not attending. [Participant W]
8. I guess my suspicion is that some of the meetings that we didn’t attend, was because we didn’t have the confidence to deal with the Councillor who might have been a little bit difficult with the police. [Participant W]

9. It’s kind of the role of the management of the neighbourhood, Local Area Command to actually deliver on neighbourhood policing in terms of crime reduction, and part of that is actually making sure that the PCs are doing what they should be doing, so are we attending the meetings that we should be attending, are we doing community engagement, have we reviewed the crime in an area, and have we got a problem solving plan in place for reducing that, does it involve partners in that process. And when you kind of face, looking at it thinking we’re not doing what we should be doing here, we need to do something about it. [Participant W]

10. There’s a reorganisation within the division taking place, and it involves transferring some roles over, back to Sergeant from a central function, and the individual Sergeants are being assessed as to their competency, and the issue with the […] South one was flagged up by us just reviewing the results of those competency sessions. [Participant W]

11. We were doing an accreditation process for each of our Sergeants, which involves taking them through their crime management system, and reviewing how they are managing each of their officer’s crimes, and when this process was on with this particular Sergeant, very quickly became clear that there was very little management at all, and jobs were going on for months without any intervention, they were sitting there, and not being looked at and so on, and when this individual was telling us about this, she was initially a little bit defensive, and then broke down in tears, and it was a, “I can’t cope without a bit of support” and so on. So there was an issue that was around welfare as well as actually needing somebody who can put up with things there. [Participant S]

12. There was all sorts of negative feedback about the guy at […] North around his management of crime, and that was one where everyone around the table was like, we all know you can do it, in fact even the guy that did the assessment said I know you can do it, but it’s obvious that you’re not doing it, so why isn’t he doing it, well there’s issues around coping with bereavement and that’s the reason why he’s not doing it, well we need to think about how we can be supportive. [Participant W]

13. There’s still a lot of issues, and I think there’s a lot of people quite stressed in our organisation at the minute, because there is a lot of pressure being applied across all ranks of the organisation. [Participant W]

14. Just really because nationally and regionally we’re considered as being poor performers and that we need to improve a lot, and I think there’s a lot of people cannot necessarily get their heads around that. [Participant W]
15. The view of the organisation is everything that we do, we could do better. So you could argue that everything that we do is not as successful as we’d have liked it to have been. [Participant W]

16. Because we are, we’re told we’ve got to make 20% improvements within the next 18 months and people are kind of thinking, we’re under a lot of pressure already, so where does it end, and actually I think that it is a big issue on this area at the minute, it’s individual personal stress levels, and we get more typical stuff in with that in terms of sickness and time off. [Participant W]

1.3 TIME PRESSURE

17. The Division’s under a lot of pressure, we need to, it’s expected that we deliver results in a time line, and could we actually perceive that we can actually deliver it with what we’ve got at the minute. [Participant W]

18. Have we got the time to actually sit down and actually address each individual who’s working there, and actually spend time to actually make it work, or do we need something a bit more quick time taking place, and that’s where it’s come up. [Participant W]

2. INTUITING PROCESS

2.1 GUT FEEL

19. I guess a lot of the things is that we all have a gut feeling about stuff within the police, about how we should be going about doing it. [Participant W]

20. The gut feeling around the room was actually we think someone needs to change. [Participant W]

21. Our gut feeling was we needed to change something, we all kind of sat round and said, yeah, that’s the right thing to do, right, we’ll approach that person, that person, and that person. [Participant W]

2.2 EXPERIENCE

22. It’s been quite new to me, because I got promoted in June to this role, so although I’ve dealt with staffing issues, I’ve not had to deal with anything quite like this before, because normally in my previous role as an Inspector I just get the kind of, the results of management’s decisions about who is going where, etcetera. [Participant W]
3. INTERPRETING PROCESS

3.1 DIALOGUE

23. We sort of sat around the table and it was like we really need to do something about this. [Participant W]

24. Each of us knew a little bit about what's happening in that area, and the moment you talk together, it's a sort of, you get a fuller picture. [Participant W]

25. As in the Senior Management Team, so Gavin, Neil, Roger and myself, we sat down, and so we kind of felt there was a need, from our perspective, to be seen to be doing something to support, but also to address some of the performance issues in terms of how we're being perceived by the public, by not attending meetings, how we are kind of perceived both internally and externally by the level of crime and our apparent not getting a grip of it, and we all felt, I think, that the weak link that we needed to work on was the Sergeant, two of the Sergeants. [Participant W]

26. That's not saying that everybody else working there was perfect, but it was kind of like what can we do, how can we make a difference. [Participant W]

27. It was really a discussion, wasn't it in Amy's office, around now who could we send down there, and then I think Amy, came up with well what about... [Participant S]

28. The discussions that we had with her, but the process probably did narrow down quite quickly into "ah-hah that sounds like a good idea!", and quite intuitively go down that line. [Participant S]

29. We think the right thing to do is to actually make some changes. And I think we all kind of left the room with, okay well that's what needs to happen. [Participant W]

3.2 RATIONALISING

30. So we ended up kind of leaving four people very, I suppose, distressed to an extent, when what we were trying to do was just deliver something that gut feeling was telling us it's the right thing to do. [Participant W]

31. With regards to the [.....] North, the officer there had suffered bereavement in his family, and it had clearly had an impact, it can take individuals long periods of time to get over that kind of thing, and with it being such an intense area we felt that somebody that had proven ability to be decisive, positive, innovative, and was a strong character as well is what was needed, and that maybe the guy that was there just needed a bit of a break really. [Participant W]

32. Well two things really, the one on [.....] South sat on a limb, the person that was performing the role she's very quiet as an individual, and is not very confident at
speaking publicly, and the PCs that work there are quite experienced, and they need strong management, otherwise they will take advantage of that Supervisor, and we felt that the Sergeant who was there was too inexperienced, and lacked confidence to be able to confront performance in relation to the Police Constables that needed firm management, and lacked the confidence to actually manage public meetings, and we didn’t have the resilience to be able to offer enough support, to make sure that somebody was there to kind of pull her up, just there to support and actually ensure that those meetings run smoothly. [Participant W]

33. We wanted to change her to response, because we felt that it would be, at least she was partly around managing staff, and managing the workloads of staff, and you’ve always got staffing issues with people anyway, but the issues of that are more about who is going to which job, and actually how are they dealing with that job, which you have to manage as a neighbourhood Sergeant, but as a neighbourhood Sergeant you also have to manage how you’re going to engage with the community, what are the local policing priorities, how are we doing problem solving in terms of actually reducing crime, so you’ve got a much broader spectrum. [Participant W]

34. So our kind of thoughts were, if we can move her to a role where she had to focus on less things, that would increase her confidence in dealing with them, and then she could probably come back to doing a neighbourhood role a little bit later on. [Participant W]

35. We had a view as a senior management team that we needed to change the management structure at two of our police stations, because we felt that the Sergeants weren’t delivering what they should have been delivering, and that we felt that there were other strong Sergeants on the Division who could step into that role and turn it round and make it a lot better. [Participant W]

4. INTEGRATING PROCESS

4.1 GENERATING OPTIONS

36. Well we actually, I think we talked about every Sergeant who was on the division, didn’t we, as to who might be suitable, how it might work, I mean, we were actually looking at whether there was any ability to bring a third Sergeant into [.....] North at the time, but we had to consider budgetary implications, and that kind of ruled it out, at that time, and then we considered bringing another Constable in to assist with the kind of management of the area, and that’s actually the route we’ve actually gone down. [Participant W]

37. In terms of the alternatives, I think we probably did briefly discuss the officers in terms of [.....] South, about can we leave the individual in place with an action plan and so on, I think to be fair it was a fairly short discussion. Five minutes maybe on it, but it was really a case of well can we afford to leave that individual in place where we’ve got this, this and this and we know we haven’t really got the time to make a change on this. [Participant S]
38. Well should we be doing this, and then at that stage it was well are there any other options, and probably the two of you then sort of came in with other options, which the next one was around the other Sergeant, and the other Sergeant going down. [Participant S]

39. I know it was a case of, well actually if we can’t have three Sergeants working there then can we ensure that we’ve got two strong Sergeants that can take it forward. [Participant W]

40. We reflected on the fact that one of the Sergeants had actually, not long before, asked to move to another area, for personal issues, and we kind of thought actually, they’re going to stick up for it, it’s like, well actually if we could get that Sergeant over there that’s really well motivated and is really effective to come into that role, and then probably the guy who is already in the post, because of his kind of family circumstances might be alright with moving elsewhere, that will strengthen one of those areas up. And then on the other area it was a case of well this person is working in an area that doesn’t have a lot of, it’s a bit out on a limb that area is, it’s away from this main station, so there wasn’t a lot of mutual support for that officer, if they got challenges in terms of their supervisory skills, and they need support, not a lot of people to offer that support, so it was kind of, okay, well if we move her across to [……], where there’s lots of other staff, supervisor to support her, and there’s another Sergeant here who is actually well motivated, who wants to get on the accelerator promotional scheme, we’ll move her across there, we’ll have the best of both worlds. Well that was our plan. [Participant W]

41. My sort of reaction was well I don’t think he’ll go for it, but okay, ask the question. I still favour the original option, so I’ll reserve that and well my favourite option is this, but let’s look at the other. [Participant S]

42. And for me that, so very heavily should have pulled us towards, actually can we leave the individual in place there, and whereas probably did consider can we leave them in place with an action plan, and so. But personally I did dismiss that relatively quickly, said no, we need to get her out and look for options in, so that alternative was fairly briefly examined, the options around that, then the options around who comes in there, I think we probably looked at in more detail, and looked at a number of other options, around well who is there available, who could go down there, and we did look at quite a few Sergeants, other Sergeants who could replace her. Probably didn’t do that in a structured way, like there’s this person, the pros and cons. [Participant S]

43. We can’t afford to actually put somebody, another officer in there, moneywise, because we haven’t got the budget to do that, to support, so actually the only option we’ve really got is actually to move him somewhere else, and swap him with somebody else, so the costs actually stay the same, so that’s how we got to where we were with the decision. [Participant W]
4.2 CONFLICT

44. The Chief Inspector, but he was aware of the discussions, I think once it started to unravel a little bit, then there was more discussion, and then the last thing that this isn’t such a good idea, and then probably there was a divergence of, I was probably still, up to quite a late stage, was still quite keen on saying, “no I think we need to stick with this”, and one by one other people were coming over, “I think this might be too much, more trouble than it’s worth”. [Participant S]

45. I think probably the first person to sort of say, “hmm, not sure about this” would have been Roger, because of the impact on the response team. [Participant S]

46. Yeah, so he sort of came up with a, “well not sure about these”, and this is a decision first, probably then some discussions with yourself [Mike], and then I think you started to waiver, would that be right? [Participant S]

4.3 CONSENSUS

47. So ultimately we, I agreed with Neil, that we would actually, that I would go and speak to Nicky, sit down with her, and actually talk through what the issues that I thought she’d got, and how she could actually address those. [Participant W]

48. At that point it was, I think there was a reasonable consensus. [Participant S]

4.4 COMMUNICATING

49. It was a plan that was in the extent of well it’s not going to be just an ask, it’s going to be a very strong ask, in fact it’s going to be, if possible, a kind of tell them that that’s what we’re going to be doing. [Participant W]

50. We approached the Sergeant from over here in [.....], and spoke to her initially, and she said, oh yeah, I’d be keen to do that. So we’re thinking, right, okay, that’s it sorted. [Participant W]

51. Neil on Saturday spent about an hour with Nicky, and she got quite upset with him, and they went through it, and then we obviously get the feedback from Anne that she now didn’t really want to do it. I mean after we’d had the conversation, I think it was on a Wednesday, we had the conversation the Wednesday afternoon, I’d arranged to see Anne on the Friday afternoon because she’d been on a course that week, and on the Thursday I’ve actually gone over to see Charles, to say Charles would you be interested in this one, if it was available, and he said no, and so that kind of wrote that one off in my book. [Participant W]

52. The next day Neil had been over to see Nicky personally, again we all thought, we kind of felt we needed to do things face-to-face, because otherwise you haven’t got the credibility as a management team. [Participant W]
53. So within a space of the Thursday, the Friday and the Saturday, we'd seen the three key individuals so, obviously having spoken to those three people, all that we thought was actually happening was that Nicky and Anne would be swapping, then the following week I got back, having knocked out, and then middle of last week we had a conversation, Roger had a conversation with Gary to see whether he would consider going to [.....] South, for him to then say, no I'm not going to do it, and then on the Friday, last week, I went over to see Alan, who's Nicky's line manager, and then spent time with Nicky, and talk things through with her, and so by Friday afternoon last week that was it, job finished. So a lot of work for actually no result really. [Participant W]

54. Myself and Roger then had a conversation, said, right, well actually what is it that's stopping him from going over there, is it about increased costs in terms of travelling, because if it is we could probably give him a bonus payment that will actually reassure him that actually it wasn't going to cost him any more, but anyway we approached him and spoke to him about it, and he really didn't want to do it, and became quite upset about it actually. [Participant W]

55. So I don't therefore need to tell him about this, because why involve him in a conversation that he doesn't need to know about, but somehow those two people ended up speaking to each other, and the one who potentially might have moved, he obviously was quite annoyed by the fact that we'd been talking about moving him without involving him in that conversation, so I then had to have a difficult conversation with him to explain what had happened. [Participant W]

4.5 REPUTATION

56. Management reputation was, I personally think, Neil might have a different view to me, but I think it was harmed by it, certainly it harmed our standing, I think overall, probably people perceive that we are quite a positive management team, and actually are looking to take things forward, but a positive management, maybe too positive really, that's what might be the take on it. [Participant W]

57. What it created was a kind of an impression perhaps that the management weren't decisive in what they were doing, and that they weren't consulting people, and letting people know what was happening. So it was probably damaging to our reputation within the Division. [Participant W]

58. Well where do we go now, we've already asked two people, who both said no, we've actually asked three people, when you talk about both those roles, and they've said no, they're our kind of three top candidates, if we keep asking more people and we keep getting a no, it's going to just make us look really weak as a management team. [Participant W]

59. It kind of required a lot of recovery, on our part, afterwards, in terms of trying to, we ended up not moving either of these two Sergeants that we originally intended to. [Participant W]
60. The implications are that if everybody knows that if managers ask you to do something and you can say no, then they’ll all say no, and it won’t happen. [Participant W]

4.6 EMPOWERING

61. Actually what we’ve got to do now, is we’ve got to work with the people that we’ve got, and just try and develop them as best we can. [Participant W]

62. So on Friday of last week I went over there, sat round with her boss and herself, and had a long chat and agreed what kind of action plan would be put in place, and give some clear direction on what was required. In January, she should be having another meeting with one of our Inspectors who’s doing the accreditation. [Participant W]

63. I spoke to the Local Commander, and he’d sort of come round, by this time, and said, look I’ve been working with her, and I think that I can put an action plan and I think I could actually turn her performance round, and I’m confident, so there it was kind of like, okay. [Participant W]

64. I think Alan, the Local Commander, has given her some clear direction as to what he thinks that she should be doing, and I’ve seen some communication between the two of them that I think is a lot more directed as to where she needs to be focussing her efforts. [Participant W]

5. INSTITUTIONALISING PROCESS

5.1 SYSTEMATISING

65. We identified issues with the crime management, so there would have been some direction from Local Area Commanders, rather than ourselves in relation to individual performance, and there was an expectation that each Inspector has a monthly meeting with their Sergeants to discuss performance issues, as I sit down with the Inspectors on a monthly basis. [Participant W]

66. One of the things that we’ve done is we’ve just come out of the process which we’re calling Talent Management and what that is, is that if you work in our division, and you actually see yourself as being somebody that is suitable for being promoted within the organisation and is prepared to actually be flexible and do something different, and go with what the organisation wants you to do, you actually put yourself up onto the Talent Management Scheme, so now if you look at that, and you think actually those two Sergeants over there would do a really good job over there, I can now approach those two people from the point of view, thinking okay you’re on the Talent Management Scheme, you want to get promoted to the next rank, you’ve got competency and experience, what we’d like you to do is we’d like you to go over there and do that particular role. They will not then, well it’s unlikely then that they’ll turn around and say, well yeah I don’t really want to do that, it’s going to impact on my family life, or I’d find it
difficult getting to work if I was to do that, or it cost me more money in petrol, or I don’t really want that challenge. Because they’ve then put themselves in the situation whereby they want to get on, and they want the organisation to give them opportunities, where they can gather evidence and experience to be able to do that. [Participant W]

67. We’ve started now this, our Talent Management Scheme up, and one of our kind of hopes with that is that it gives me a pool of officers who, if I get a problem where I need to do something about it quite quickly, I will have a willing volunteer, which would make it a lot easier. [Participant W]

68. Well we’ll have the review in January and we should have the Talent Management Scheme in process by then, whereby we have got individuals that actually want to be developed, and to take on new roles within the organisation, so my expectation will be that, when I ask somebody if they’ll do it, they’ll actually say yes. [Participant W]

POST-DECISION PROCESSES

1. REFLECTING

69. When you actually look back on it and say well actually what was the weakness in that plan, the weakness in the plan was the fact that we kind of made an assumption that people that were very productive who were very much behind the organisation in terms of taking it forward, were prepared to be flexible to work with the organisation, and actually, also that they didn’t really hold a confidence as we would have hoped that they would have done. [Participant W]

70. I just see it that way, but that was the kind of the thinking, and I still feel, to this day, that if those two people had been moved to those particular roles they would have been the right people to have there. [Participant W]

71. If the two people concerned were willing volunteers I think it would have actually happened in the way that we originally envisaged, and it would have probably worked okay, I mean certainly there would have been a little bit of unhappiness in the first instance with regards to the two people involved, but I think we could have worked through that, but it didn’t pan out for the reasons that I said really. [Participant W]

72. I still think it would be the right thing to do in terms of those individuals, unfortunately those individuals didn’t see it that way. [Participant W]

73. But it’s kind of, it is an ongoing process, and I think people can see that actually there are still changes taking place every day, sometimes there can be a bit of a hiccup, this is a bit of a hiccup in my estimation, but ultimately we will make some progress and standards will improve. [Participant W]
74. It’s a really strange concept for me, because in my own experience of the organisation, been in the organisation for 17 years, and whenever I’ve been asked to do a job, I always say yes, I will do it, and it’s quite alien to me to actually find people that are so reluctant to actually change within the organisation. Especially people that you perceive as being people that want to get on within the organisation, and maybe that’s just me applying my own standards to other people incorrectly, but it is just, it’s really quite unusual, in my experience. [Participant W]

2. LEARNING

75. ...and I still think it was the right thing to do, but actually having thought through the process now, I would do it a different way, hence now we’ve got a different plan in mind for how we deliver future changes on those sort of lines, so, I think, I mean I guess that’s as simple as it is really. [Participant W]

76. I guess the learning is, as much as it’s your gut instinct that you need to do something like that, just make sure you’ve crossed all your bridges, or made sure that you can actually deliver on it, before you actually commit to it, because the risk is that the management look weak. [Participant W]

77. My decision making would be, unless I knew that I had somebody that would go and work wherever I asked them to, I wouldn’t do it the same way again. I’d make sure I had somebody first and I wouldn’t even consider what the post was going to be, but if I thought, if I got somebody in the organisation that was working here, that I thought that was doing a cracking job and it was born out by evidence to support that, I’d say to her “well what do you see yourself doing in the organisation”, and I’d look towards mentoring people myself, in terms of actually, you know, if there’s an opportunity would you be interested, and actually then come back to them separately, and say “this might be coming up, would you be interested in it”. [Participant W]
Appendix 8

List of Publications
Refereed Journal Articles


Conference Proceedings


Akinci, C. and Sadler-Smith, E. (2010) “Intuition and Organizational Learning”, International Conference on Organizational Learning, Knowledge and Capabilities, Boston, USA, June 3-6.

