The Development and Testing of an Emotion-Enabled, Structured Decision-Making Procedure

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Abstract

Two contrasting forms of advice for decision-makers are to either follow one's heart (emotions) or one's head (reason). This is a false dichotomy – but how should decision-makers combine heart and head?

Decisions can be fruitfully analysed as a set of *components*: a *decision-problem* embedded within an *on-going situation*, with *values-at-stake,* possible *options-with-consequences*, *choice*, *action* and *review*. Structured decision-making models (head theories) approach this multi-faceted nature of decisions by a *divide-and-conquer strategy* with *thinking tasks* provided to help decision-makers clarify the decision-problem, identify important values-at-stake, find credible options, choose the most credible option, act effectively and fairly review the outcomes of the choice.

Emotions are complex and can also fruitfully be analysed as a set of *components*: an *appraisal* of a situation's implication for the actor's goals and values, *bodily* and *cognitive changes*, *phenomenological experience* and *desires*. Emotions can both help and hinder decision making, so wise decision-makers should neither ignore nor rely upon emotions, but instead treat emotions as *fallible resources*. The complex nature of emotions implies that different *emotion-enabled tasks* might assist decision-makers for different *components* of the decision.

On the basis of this analysis an *emotion-enabled, structured, decision-making procedure* was developed and investigated by taking ten participants with decision dilemmas through the procedure. This investigation, based on repeated use of the Hermeneutic Single-Case Efficacy Design, provided some initial support for the effectiveness of the model: participants found the procedure generally helpful ($p < 0.005$), had increased confidence in their final choice ($p < 0.005$), which at follow-up they were satisfied with ($p < 0.005$). The use of emotions as fallible resources was also investigated through tracing emotion-enabled changes in participants' decision making. Suggestions for further development and investigation of integrating emotions into structured approaches are offered.

Contents

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CHAPTER ONE: Why A Model Of Emotion-Enabled Structured Decision Making?

Chapter Contents

1. Preamble

Thagard and Millgram (1995) tell the following "possibly apocryphal story":

> … an eminent philosopher of science once encountered a noted decision theorist in a hallway at their university. The decision theorist was pacing up and down, muttering "What shall I do? What shall I do?"
>
> "What's the matter, Howard?" asked the philosopher.
>
> Replied the decision theorist: "It's horrible, Ernest - I've got an offer from Harvard and I don't know whether to accept it."
>
> "Why Howard," reacted the philosopher, "you're one of the world's great experts on decision making. Why don't you just work out the decision tree, calculate the probabilities and expected outcomes, and determine which choice maximizes your expected utility?"
>
> With annoyance, the other replied: "Come on, Ernest. This is serious."

Whether this story is true or not[i] it captures an important feature of decision making – that making serious decisions is an emotional affair.

The question is what to make of the undoubted fact that serious decisions are laden with emotions. Decision-makers can wonder whether their emotions help or harm their decision making – should they ignore untrustworthy emotions and rely on their 'head', or follow their emotions as their 'heart' is telling them what they truly want to do.

It is argued that this is a false dichotomy as emotions can both help and harm decision making. The task is to investigate how it is possible for decision-makers to *use* their emotions wisely so they can avoid the pitfalls caused by sliding down the 'snakes' of emotions and gain the benefits through climbing up the 'ladders' of emotions.

2. An Outline of the Argument

Premise 1: Decision making is a central activity of work (e.g. management decision making) and about work (e.g. career decision making).

Premise 2: There are texts that offer pragmatic, and broadly generic, advice on how to make decisions. This advice is to follow a structured, divide and conquer process that breaks decision making down into stages with goals and tasks for the different stages.

Premise 3: This advice is broadly defensible.

Premise 4: Some decisions are perceived to be serious and difficult and these decisions are often full of emotional distress (as well as more positive emotions).

Premise 5: The texts offering pragmatic, broadly defensible, generic advice on decision making have, in general, little to say on emotions.

Premise 6: Emotions are central to serious decision making, and a proper appreciation of the nature of emotions can show how emotions can both help and hinder effective decision making.

Conclusion: Generic advice on decision making, especially for emotion-laden decisions, can be improved by developing an emotion-enabled account of how to use emotions wisely within the stages of a structured, divide and conquer decision-making procedure so that decision-makers can capitalise on the help that emotions can provide and minimize the harm they can cause.

3. The Central Premises

3.1 Premise 1: Decision making is a central activity of work and about work

An appeal to the literature

Decision making has long been recognised as either the key - or one of the key - tasks of management by both founding fathers such as Fayol, as well as contemporary theorists (e.g. Simon, 1997; Mintzberg 1973). Decision making is also central to the career literature (e.g. Mitchell and Krumboltz, 1984).

An appeal to the human condition

As humans possess the capacity to reflect upon what they do and consider doing things differently, they are inevitably faced with choices in their work, and about their work, as for life in general (Sartre, 1943/2003). Sartrean metaphysical freedom is not required for this. All that is required is that humans are able, to some extent, to reflect upon and regulate their own behaviour – in Dennett's phrase that they have some 'elbow room' (Dennett, 1985). Given this it is unsurprising that the management and vocational literature have identified decision making as a core task.

The importance of effective decision making

Given the role of chance in a somewhat unpredictable and uncertain world, good decision making does not necessarily mean a good outcome, nor does a good outcome necessarily imply good decision making. Nevertheless as the world is somewhat uncertain and unpredictable rather than totally uncertain and unpredictable, and as decision making is so central to all aspects of human endeavour, research into effective decision making is of the highest import.

3.2 Premise 2: Texts offer pragmatic advice on decision making

Kinds of literature on decision making

There is a balance to be struck between different kinds of research into decision making. Different research strands within the decision making literature seek to identify:

(i) How humans' cognitive systems (i.e. the mind/brain) tend to work and the kinds of limitations and flaws that they are subject to (with debate around whether or not the alleged limitations and flaws really are limitations and flaws or functional adaptations).

(ii) How to sidestep the limitations and flaws of cognitive systems through changing choice architecture (e.g. Thayer and Sunstein, 2008), or developing assistive technologies, or structuring decision-making systems within organisations to circumscribe and weed out the damage caused by these limitations and flaws (e.g. Finklestein, Whitehead and Campbell, 2008).

(iii) How to develop the resources of cognitive systems through 'debiasing' training (e.g. Fischhoff, 1982; Larrick, 2007), education (e.g. Baron, and Sternberg, 1987; Nisbett, 1993) or developing specific expertises (e.g. Klein, 1998).

(iv) How to effectively use the resources of cognitive systems in a coherent, structured way to improve decision making.

Perhaps because of the influence of Simon, Tversky and Kahneman, and perhaps because this topic is the most tractable to the laboratory experiment (psychologists' preferred mode of investigation), even the most cursory perusal of the literature will testify that strand (i) has been where the vast bulk of decision-making research has focused. Within this strand there has been a predominance of research focused on 'cold' processes, although more recently there has been a growing literature on emotions in decision making and it has even been called a 'hot topic' (Peters, Vastfall, Gaerling and Slovic, 2006).

The structured decision-making literature

Nevertheless the other strands have received some attention. Within strand (iv) this review focuses on four different theorists: (a) Kepner and Tregoe, (b) Janis and various colleagues, (c) Nutt, (d) Raiffa, Keeney and Hammond. These have been selected as:

1. There is an extensive body of work, which has been widely cited in the academic literature in general, and the management literature in particular.
2. The investigation of normative decision making has been a - and often the - central concern throughout their professional life.
3. Their accounts of normative decision making are theoretically well-based, and developed and tested through experience.
4. These normative decision-making models have been proposed as a generic guide to making decisions, applicable across 'domains'.
5. The models of normative decision making they have developed have been adopted in practice within organizations and elsewhere.

These criteria are neither necessary (not all of the theorists satisfy them all) nor sufficient (other theorists that meet these criteria are not included). Nevertheless these criteria provide guidance for who to include; many concepts are not definable by necessary and sufficient conditions but can still be used (Wittgenstein, 1958). The criteria provide a "range definition" (Wilson, 1963) for concepts that have vague boundaries; 'range' is a term that is used by analogy to mountain ranges – where a mountain range begins and ends is vague but you still can tell it is there[ii].

3.3 Premise 3: Using a structured, divide and conquer, process is defensible

Broad agreement about the logic of structured decision making

The advice offered in the texts is broadly similar (see chapter 3) which can be explained by the logic of decision making. The analysis of a decision, into a set of components, implies that different goals need to be fulfilled, depending upon the component. It is sensible to fulfil these goals in a set order, when meeting a particular goal logically depends upon the satisfactory fulfilment of a previous goal. For example it is difficult to work out your values and objectives in making a decision if you are unclear what you are trying to decide about, it is difficult to find good options until you are clear what your values and objectives are (Keeney, 1992), and you cannot choose an option you have not thought of (Hammond, Raiffa and Keeney, 1999)[iii].

All of these theorists take a 'divide and conquer' approach to decision making in which decision making is broken down into different, sequentially-ordered components, requiring different tasks to meet the goals of the different components. These models are reviewed subsequently.

Empirical evidence

While normative decision making is seriously under-researched there is some evidence that decision-making outcomes are better with structured rather than unstructured approaches (Herek, Janis, and Huth, 1987; Nutt, 1999, 2005, 2007, 2008). This research is reviewed subsequently.

The nature of the claim and the clarification of possible confusions

Not all writers agree that a structured divide and conquer strategy is the best way to approach decision making. This section will provide an argument for why the advice is broadly true and point to some qualifications required to this claim.

1. Why 'broadly generic'?

a) The generic components of a decision.

The basis for the claim that the guidance is generic is that by definition decisions contain

certain components, that imply goals and that there are generic tasks that can be used to meet the goals of the varied components. Moreover the nature of the goals implies a broadly sequential ordering of the components, as successfully meeting the goals of one component depends upon meeting the goals of another component.

Table 1: The ordered components and goals of a decision

Decision Component	Goal
Decision-problem embedded within an on-going situation	Clarifying decision-problem
Values-at-stake	Identifying important values at stake
Options-with-consequences	Finding credible options
Choice	Choosing option aimed at realising important values at stake
Action	Acting effectively to realise choice
Review	Monitoring and adapting action depending upon the success of the choice and the changing nature of the on-going situation

The nature of a 'decision' is analysed in chapter two. Chapter three analyses the normative decision-making literature in terms of these components and goals, and reviews the tasks proposed in the models to meet the goals of the different components.

b) Process not content

Decisions differ in their content, but the decision-making models do not seek to tell decision-makers what to think, but rather how to think. It is the how, not the what, which is broadly generic. As Benjamin Franklin emphasised, in answer to request for advice from his friend Priestly, "[i]n the affair of such importance to you, wherein you ask my advice, I cannot for want of sufficient premises advise you what to determine, but if you please I will tell you how" (MacCrimmon, 1973).

2. The range of decisions

The potential broad applicability of the advice can be illustrated through the range of decisions the theorists analysed subsequently offer advice for. Altier claims that Kepner and Tregoe:

> Offers executives and managers and any and all breeds of problem solvers, decision makers, and planners a complete set of fundamental thinking processes they can use to handle any situation. Because these processes are based on the fundamentals of applied logic, they can be used in *any* type of situation" (Altier, 1999, p vii, emp original[iv])

Kepner and Tregoe (1981) provide the following examples of decisions, drawn from their own practice to illustrate how their model can work in practice[v]:

> Examples of the range of decisions in Kepner and Tregoe (1981)
> - Deciding how to increase the research and development capabilities of an organization
> - The selection of a personnel information system
> - The choice of a mining method for the removal of pillars supporting a mine
> - The decision by the Department of Natural Resources to accept or reject a proposed plan for managing the water quality of a river
> - Whether or not to decentralise computer systems in an insurance company
> - A paper and wood products company that needs to determine whether a proposed distribution system was good enough
> - A sugar company looking to find the best way of ensuring a stable, optimum supply of cane sugar

Janis' research has spanned career, health, American foreign policy and business decision making and the same model of normative decision making appears in all these different areas (Janis and Mann, 1977; Janis, 1983; Janis 1987).

Hammond, Keeney and Raiffa (1999) claim that the advice they offer is suitable for "any decision worthy of serious thought, whether it requires two minutes or two months. For example, workplace decisions such as whether to enter into a new activity or which employee to hire or how to arrange a travel itinerary. Personal decisions such as which house to buy and what price to offer or whom to invite to a dinner party" (1999 p viii).

> Examples of the range of decisions in Hammond *et al*. (1999)
> - Whether to sell a business
> - Whether to renovate or move house
> - Selecting a primary school
> - The clarification on the Environmental Protection Agency policy on air and water pollution
> - Whether to stay with the firm that funded your MBA
> - Different marketing strategies for a drinks company
> - Whether to submit an engineering proposal to a government agency
> - The kind of office party to organise
> - Whether to settle a court case before trial

Keeney in Value-Focused Thinking (1992) illustrates his advice for how to make better decisions with examples drawn from career decision making, his consultation work with organisations such as NASA, the US Department of Energy, and a Silicon Valley company, and his own personal and academic life. Keeney (1994) provides further examples and an account of using value-focused thinking for developing business strategies for Conflict Management, Inc[vi].

Others have used concepts drawn from Hammond *et. al.* (1999) to choose strategy in rural enterprise in Finland (Kajanus, Ahola, Kurttila, and Pesonen, 2001), improve the quality of watersheds (Merrick and Garcia, 2004), help nurses decide whether to quit their jobs (Luo and Cheng, 2006) and plan and assess stability operations by the US in foreign countries (Fensterer, 2007).

Limitations to the generic claim
Nevertheless there are limitations to this generic claim as either types of decisions or types of decision-maker might not be appropriate to the structured approach.

a) Types of decision
The kinds of decisions which are less likely to be appropriate include those that:
- Are unimportant so not worth the time or so straightforward the choice is obvious
- Are so difficult, perhaps because of lack of information, that reflection is unlikely to help at all

- Need to be made very fast (although here it might still be reasonable to do the stages, or a subset of them very quickly)
- Can be made solely through intuition, perhaps by pattern recognition (Klein, 2003)
- Can be made by following an algorithm or by calculation alone
- Belong to a class that has already been determined and have become subject to a reasonable policy, routine or habit (Simon, 1997).

Decision-makers need to consider the issues they wish to devote their time and energies to considering. James wrote:

> There is no more miserable human being than one in whom nothing is habitual but indecision, and for whom the lighting of every cigar, the drinking of every cup, the time of rising and going to bed every day, and the beginning of every bit of work, are subjects of express volitional deliberation (James, 1890, vol. 1, ch. 4)

As Nathanson points out James, had he lived in a different time period with other information available, might have found it worthwhile considering his habit of cigar lighting (Nathanson, 1994).

b) Types of decision-maker

Structured decision processes might not be suitable for certain kinds of decision-makers. While this is an empirical question which needs to be settled for different kinds of procedures, possible mismatches are with decision-makers who:

- Have processing difficulties that significantly impair their effective use of cognitive systems (Stanovich, 2009b).
- Do not see the need for a structured process and hence do not 'buy-into' either the process or the outcomes (Tinsley, Tinsley and Rushing, 2002).
- Have such deep-seated emotional difficulties that extensive therapy is needed before decision making is appropriate.

The existence and significance of disputes within the decision-making literature

Not everyone writing within the decision-making literature agrees that decisions are best made by following a structured process, with some writers instead advocating relying on intuition - particularly experts' (e.g. Agor, 1986 and Klein, 1998, 2003). Given the wide range of meanings of key terms such as 'rational' and 'intuitive' it is perhaps less clear than it might be exactly what is being argued about. Furthermore it is the case that intuition is used within structured decision-making models. These issues are explored in chapters two and three. Nevertheless clearly there is room for disagreement on this issue and perhaps the most that can be concluded is that there is a developed literature advocating structured decision making and that this is defensible – not that it is agreed to by everyone, nor that it is conclusively proven that structured approaches are better than unstructured processes.

3.4 Premise 4: Difficult decisions are emotional

While some decisions are made largely without emotions by, for example, following a routine or habit, others decisions are perceived to be serious and difficult and these decisions are often full of emotional distress, even turmoil, as well as more 'positive' emotions.

This premise is recognised by the vignette in the preamble and by Janis and Mann:

> The acute agitation of men and women in the throes of decisional conflict is often depicted in movies, television, magazines, and other mass media. People are constantly being reminded of what they already know from personal experience-that making a consequential decision is a worrisome thing, and one is liable to lose sleep over it. Yet in the extensive writings by social scientists on decision making we find hardly any mention of this obvious aspect of human choice behavior, or any analysis of its nonobvious implications (1977, p 3).

3.5 Premise 5: The texts have, in general, little to say on emotions

While, with the exception of Janis' work, there are scattered remarks on emotions in the structured decision-making texts, there is little sustained examination of what emotions are and how to use them effectively as a resource in decision making[vii]. With the exception of the works by Janis none of the texts features emotions in the index or make anything more than occasional remarks about the role of emotions. None of the texts, including Janis, present or draw upon, theoretical accounts of the nature of emotions. The place of emotions in these accounts will be reviewed in subsequent chapters.

3.6 Premise 6: Emotions can both help and hinder effective decision making

There is a developing literature on the nature of emotions with implications for how emotions can undermine or improve decision making which is reviewed subsequently.

Decision-makers can try to:

> (a) ignore their emotions, or
>
> (b) follow their emotions, or
>
> (c) use their emotions as a fallible resource.

Ignoring emotions is not viable as emotions are endemic to difficult, serious decisions and will influence decision making, for good or ill, whether decision-makers seek to ignore them or not. Simply following emotions is potentially foolish as emotions can undermine wise decision making through misrepresenting facts and promoting unenlightened values and can either terminate the decision-making process too quickly or prolong it unnecessarily. Decision-makers are best advised to reflectively use emotions as a fallible resource as emotions can provide useful information and motivation, as long as the wheat is separated from the chaff. This argument is made subsequently in chapters four and five.

3.7 Conclusion: Structured decision-making models can be emotion-enabled

There is a *prima-facie* case that generic advice on decision making, especially for serious, emotion-laden decisions, can be improved by developing an account of how to use emotions wisely within the stages of a structured, divide and conquer, decision-making model.

4. The Task Ahead

To develop a fuller and more detailed model of how emotions can help or hinder structured decision making two literatures – the normative decision-aiding literature and the emotion literature – are analysed and integrated. The task is approached in the following way:

1. *A theory of wise decision making is developed* (chapter two). This provides a means to analyse the normative accounts (chapter three), guide the development of the emotion-enabled procedure (chapter five) and suggest empirical tests of the model (chapter six).

2. *Normative structured decision-making models are reviewed* (chapter three) to:
    a. Analyse theories of structured decision making, and the stages, goals and tasks in these models.
    b. Analyse the role of emotions, explicit or implicit, within these models.

3. *The emotion literature is reviewed* to develop a theoretically grounded theory of the nature of emotions (chapter four).

4. *This theory of emotion is used* (chapter five):
    a. To show how emotions are a resource that can help decision making (if used wisely) or hinder decision making (if unwisely used).
    b. To integrate the use of emotions into an emotion-enabled, structured decision-making process by identifying emotion-related tasks the decision-maker can carry out in the different stages of decision making to (hopefully) improve decision making.

5. *A methodology for investigating the decision-making process is developed* and an initial *empirical investigation* of the emotion-enabled structured decision-making process, delivered through "decision coaching" (Russo and Schoemaker, 2002) is carried out (chapter six).

6. *The data generated is analysed* to investigate the emotion-enabled structured decision-making process (chapter seven).

7. *Conclusions* about the effectiveness of the process, limitations to the current research, and suggestions for future research, are drawn (chapter eight).

 Notes:

[i] Bazerman, Tenbrunsel, and Wade-Benzoni (1998) report that Howard Raiffa, the target of the story, denies its truth.

[ii] On sufficiency: Other models that could have been explored include Gelatt (1962), D'Zurrila and Goldfried (1971), Horan (1979), Gati and Asher (2001), Sauermann (2005) and Nezu, Nezu and D'Zurilla (2007). Initially the research of Russo and Schoemaker (1989, 2002) was going to be included – however for reasons of length and because their suggestions seem broadly covered by the other theories reviewed it was decided not to. Given limitations of space in reviewing models there is a choice to be made between analysing many more superficially, or fewer in more depth. The decision was made to review fewer in depth, focusing on those that best meet the criteria above.

On necessity: Tregoe and Kepner's procedure, for example, is not based in a previously developed theory, but rather grew from experience, and Nutt's ideas have not become, as far as this writer is aware, the basis for any large-scale organisational consulting business (although his texts are often core reading on decision-making syllabi so his ideas might have become influential for those taking the course and others who have read the book).

[iii] A criticism of these structured models is that decision making should be more fluid (e.g. Klein, 1998). This criticism seems to miss its mark. That there is a logic to the stages of decision making is not inconsistent with the claim that decision making should be iterative nor that people do in fact consider these different factors at the same time. The stages provide a way to order thinking not to limit thinking.

[iv] Kepner and Tregoe analyse four processes – Situation Analysis, Problem Analysis, Decision Analysis and Potential Problem and Opportunity Analysis. It is argued that decision making, understood widely, can incorporate aspects from all of these processes. The table below only includes examples drawn specifically from their section on Decision Analysis.

[v] Further case studies are available on the company website.

[vi] Conflict Management, Inc. is concerned with negotiation and dispute resolution, and includes in its principles Fisher and Ury, authors of Getting to Yes.

[vii] Kidd (1998, 2006) makes similar comments on theory in career decision making.

CHAPTER TWO: A Theory of Wise Decision Making

Chapter Contents

1. Introduction: The shadow of the Rational Choice Model

The Rational Choice Model

Much of the writing and research in decision making has been influenced by Utility Theory and the classical model of Rational Choice; these concepts have cast a very long shadow (Gilovich and Griffin, 2002), and many different issues seem to have become caught up in the debate over the Rational Choice Model. This chapter identifies and untangles some of these issues, and argues for a theory of wise decision making.

The Rational Choice Model has its roots in probability theory (Bernoulli, 1783) and Bentham's hedonic calculus (1789) and was developed into its modern form by von Neumann and Morgenstern and Savage (cited in Plous, 1993). The Rational Choice Model has been advanced as both a descriptive account of how people do decide and a normative account of how people should decide, these two perspectives happily coinciding as people are, so the theory assumed, perfectly rational decision-makers. Both the descriptive and normative assumptions were subsequently to be challenged.

The Rational Choice Model is built upon three basic concepts and their relationships: the utilities or preferences of the decision-maker, options, and the states of the world which determine the probability that a particular option will realise the decision-maker's utilities (Baron, 2008). To illustrate through a simple example, suppose that a decision-maker is pondering which car to buy. The decision-maker has weighted preferences (or 'utiles') for various features of a car (for example its fuel consumption, its cost and so on), there are different options (kinds of cars) possible and these different cars might or might not enable the decision-maker to satisfy their preferences according to some level of probability. According to Rational Choice theory the decision-maker can calculate the choice that best satisfies their preferences by summing how well each choice is likely to satisfy their weighted preferences. Formally this is Expected Utility (EU) = $\sum P_i U_i$ where P_i is the probability of the outcome i and U_i is the utility or desirability of that outcome.

Table 2: An example of a choice according to the Rational Choice Model

		Options		
		Car 1	Car 2	Etc... (More cars)
	Good gas mileage (9)	9 * probability satisfied	9 * probability satisfied	9 * probability satisfied
Utility (measure /10)	Reliability (8)	8 * probability satisfied	8 * probability satisfied	8 * probability satisfied
	Appearance (6)	6 * probability satisfied	6 * probability satisfied	6 * probability satisfied
	Etc for further features	Etc	etc	etc
	TOTAL UTILITY (choose option with highest score)	Sum all values in column	Sum all values in column	Sum all values in column

The shadow cast: three issues

The shadow cast by the Rational Choice theory, and entangled issues include:

1. The definition of what is meant by a 'decision'
2. The definition of what is meant by 'rational'
3. The relationship between normative and descriptive accounts

These issues are explored below.

2. Issue one: The definition of a decision

2.1 A decision defined according to Rational Choice theory

What is the subject under investigation?

What is the subject of investigation when decision making is being investigated? Hastie and Dawes define a decision, according to "scientific decision theory terms" (2001, p 25) – meaning Rational Choice theory – as comprising three parts:

a) there is more than one possible course of action under consideration, "in the choice set"
b) the decision-maker can form expectations concerning future events and outcomes following from each course of action…
c) consequences, associated with the possible outcomes, that can be assessed on an evaluative continuum (2001, pp 25-26)

The narrowness of the investigation

On this analysis, a decision is limited to the act of a choice between already identified alternatives and preferences. In the case of Howard, in the story above, his decision is defined by the act of choice between already identified alternatives – whether to take the post at Harvard or not – with already identified possible outcomes with different already identified expected outcomes and already identified utilities judgements. It is on the basis of these already identified factors that the tools of analytic decision making such as decision trees can be built, and expected utility calculated. Without this data a choice cannot be made according to 'scientific decision theory terms'.

2.2 A wider definition of a decision

Concepts are tools for thinking about concerns

How we choose to define concepts depends upon the use we want to put the concepts to so there is no reason to be tied to 'scientific decision theory terms' for a definition of a decision (Wilson, 1963/9). Concepts are tools for thinking so the kind of tool we should use depends upon what we wish to accomplish with it; what our concerns are. For example, Wilson compares definitions of a 'fish'. For the botanist, concerned with trying to map evolutionary paths and homologies, a whale is not included in their definition of 'fish'. However, the Department of Fisheries, concerned with the tonnage of sea creatures caught, would find that including whales in their concept of fish captures their concerns, while the fisherman concerned with what he can catch, could exclude both whales and sharks from his category of fish. Our concepts can 'carve' the world in different ways depending upon our concerns.

On missing the central concern: aiding better decision making

While 'decision making' can be defined as limited to the choice alone, as the Rational Choice Model and much of the experimental research in behavioural decision making tends to, if the focus is the pragmatic one of how to aid better decision making, because we are concerned to improve organisations and lives, we should define 'a decision' more broadly. Keeney explains this point:

> Many books have been written about decisionmaking. They tell us how to solve decision problems. They do not tell us how to identify potential decision opportunities. They tell us how to analyze alternatives to choose the best one. They do not tell us how to create alternatives. They tell us how to evaluate alternatives given some quantitative objective function. They do not tell us how to articulate the qualitative objectives on which any appraisal of alternatives must rest…Almost all of the literature on decisionmaking concerns what to do after the crucial activities of identifying the decision problem, creating alternatives, and specifying objectives. But where do these decision problems, alternatives, and objectives come from? This book describes and illustrates the creative process that you should follow to identify your decision problems, create alternatives and articulate your objectives (1992, p vii).

The overly narrow focus on the choice

Keeney's argument implicitly criticises limiting the definition of 'a decision' solely to a choice. The problem with defining a decision as nothing but a choice is that this ignores how decision-makers can specify what we are trying to decide about, work out what they care about in making the decision and identify credible options upon which to base their choice; these are vital matters in helping people make better choices. Keeney does not include the further requirement that decision-makers need to act upon and monitor their decision, a pragmatic justification for a further widening of the concept of a decision.

Simon (1983) makes a similar point to Keeney when he argues that SEU - the Rational Choice Model - is problematic as:

> The SEU model finesses completely the origins of the values that enter into the utility function; they are simply there, already organized to express consistent preferences among all alternative futures that may be presented for choice. The SEU model finesses just as completely the processes for ascertaining the facts of the present and future states of the world. At best, the model tells us how to reason about fact and value premises; it says nothing about where they come from (1983, p 13-4).

That SEU says nothing about the origins of values or how to ascertain facts points to the *narrowness* of SEU. Given this SEU cannot claim to be a *complete* theory about how to make decisions, leaving open the question of how we can reasonably uncover and identify values and ascertain facts.

Defining decision making more broadly

Given that the motivating concern this research is concerned with is helping people (e.g. leaders, managers, professionals and individuals in their personal lives) make better choices, the proposed definition of 'a decision' is:

> A *decision-problem*, embedded in an *on-going situation*, in which:
>
> i) *Values are at stake*;
>
> ii) Different *options* are possible with *consequences* with *uncertain outcomes***;**
>
> iii) The decision-maker needs to:
>
>   a) *choose*
>
>   b) *act* and then
>
>   c) *monitor* and *adapt* the choice.

To clarify these terms let us apply them to Howard's decision: His *decision-problem* is whether or not to take the offer from Harvard, the *on-going situation* it is embedded in his current work and life situation. The *values-at-stake* are how this decision-problem will impact what he cares about connected to his work, location and related factors within his situation. The two *options* are to stay where he is or take the offer from Harvard, and the *uncertain outcomes* are connected to what will staying where he is or going to Harvard turn out to be like. He needs to *choose* between these alternatives, and *act* on his choice by accepting or rejecting the offer and *monitor* whether the choice he made is working out or not – is it fulfilling what he cares about, his values (or does experience and further reflection suggest the values pursued were not 'enlightened' after all, or that the on-going situation has changed in some significant way), and *adapt* his choice accordingly.

It follows from the definition of a decision above that decision making involves judgements or sub-decisions besides choosing including: clarifying the decision to be made, understanding the situation the decision is located within, identifying enlightened and important values-at-stake the decision should satisfy, finding credible options, evaluating whether the options are likely to satisfy the enlightened and important values-at-stake, choosing the best option from the choice set, acting on this choice, and monitoring and adapting the resulting course of action.

Again this can be clarified by applying this to Howard's decision: What is it about Howard's situation that has brought him to the place where he feels he has a decision problem? Is Howard sure that his decision-problem is best framed as a choice between going or not to Harvard rather than, say, finding how best to satisfy his career values? Has he considered enough aspects of his current situation – for example does he have a family whose interests he needs to consider – in framing the decision-problem? What is it that he values about Harvard, and where he is currently based; are there other aspects of his situation such as ongoing plans involving his family that are at stake in this choice? Are his only options staying where he is or going to Harvard? What are the possible implications of going to Harvard, staying where he is, and other possible options, on the realisation of these values at stake? Given all this, what should he choose and how is he going to monitor if the choice really does fulfil these values?; and how will he adapt his choice (or his values) if it does not?

Dawes and Hastie add two further 'unofficial' criteria to their definition of a decision. First, that the decisions are "deliberate, conscious accomplishments" rather than the outcome of automated processes (so 'choosing' where to look while reading a text is not a decision), and second, that "prototypical, representative decision situations" involve serious matters (2001, p 26). These unofficial criteria accord with the meaning of decision used here. Finally it is worth specifying how the term 'decision making' won't be used here. Sometimes 'decision making' is used for judging whether a proposition is true or false, or deciding what to believe - for example deciding whether global warming is the result of human activities. In terms of the definition of a decision offered above, this judgement might be an activity carried out to determine beliefs as part of understanding the situation facing policy makers, but is not, as such, a decision as no consideration of values-at-stake or possible options is involved.

Defining values

The concept of values is complex and disputed, and although extensive philosophical exploration is beyond the reach of this paper (see Schroeder (2008) for a recent summary of the debate), some explanation is in order of the use here of 'value' and related terms. 'Value' refers to the worth of something, and contains the idea that some things have more worth or are

more valuable than other things. Some values might be 'instrumental', providing a means to other values, and some values might be 'final', simply good or worth having in themselves. Money is the paradigmatic instrumental value as it is valuable to the pursuit of a range of other ends; final values proposed in the philosophical literature have included pleasure, happiness, knowledge, meaningfulness, friendship, peace of mind and virtuous character (e.g. Aristotle, 350 BC/1980; Nozick 1974; Griffin, 1986). LeBon and Arnaud (2004) note that there are three broad categories of value: states of the world (the decision-maker's impact upon the world), states of mind (the future phenomenological experiences of the decision-maker), and character (the kind of person the decision-maker is and becomes through their choices). Within a modern society particular organisations and professional bodies are tasked with meeting particular values; for example the fire department is concerned with meeting the values of the protection of life and property through fire prevention and fighting (Simon, 1997). Similarly certain informal roles, such as parent or mentor suggest the pursuit of particular values.

Values relevant to a decision, because the decision impacts on them in some way, are termed 'values-at-stake'. It is assumed that people can act unwisely not just through poor means-end reasoning, but also in desiring and pursuing ends that are not valuable; ends that are not valuable are 'unenlightened values', those that are valuable are 'enlightened values' (why people might pursue unenlightened values is explored below). This is not to assume a utilitarian framework for values as Kantian values are also the outcome of decisions. Kantian values are certain outcomes embedded within the decision-makers' act (for example decision-makers are lying or not in acting on their choice), while utilitarian values are later consequences of the choice that may or may not come about with a certain level of probability (lying or telling the truth might lead further goods or bads).

Terms similar in meaning to 'values' are 'objectives' and 'goals'; while these are often used somewhat interchangeably (Keeney, 2004) it is possible to use them to capture different, although related, meanings, according to the increasing specification of the realisation of the value. Suppose, for example, that knowledge is taken to be a final value; an objective related to this could be to increase the number of people in the population with first degrees (i.e. a target to aim for that contributes to the realisation of the value), and a goal could that 50% of the

population has a degree by 2050 (i.e. a specification of the target that provides a measure of achievement towards the objective). However these differences are somewhat vague and writers often use 'values', 'objectives' and 'goals' interchangeably in ways that are readily understandable – indeed many of the theorists analysed below use 'objectives' where this writer would more naturally use 'values'. 'Values', 'objectives' and 'goals', and other cognate terms, have in common that they are all connected with answering the question, "what matters about the outcome of this decision?" Another term closely related to 'values' are 'preferences' or 'desires'; the issue of whether values are equivalent to preferences or desires is explored below.

Conclusion:

Wise decision making recognises that decisions have many components; not just a choice. These components are a decision-problem located in an on-going situation, with values-at-stake, possible options with uncertain consequences, choice, action and evaluative review.

3. Issue two: The definition of rational

Four questions around the meaning of rationality

There are a number of different questions around the definition of rationality:

a) Does rationality = 'Olympian' rationality?
b) Does rationality = the effective pursuit of self-interest?
c) Does rationality = the use of reason?
d) Does rationality undermine action?

These questions are explored below and some further general conclusions drawn for wise decision making.

3.1 Question 1: Does rationality = Olympian rationality?

Olympian rationality

Simon (1983) argued that the 'Olympian' SEU Rational Choice Model was often either impossible or unwieldy for human decision-makers, and that the use of cognitive shortcuts, or heuristics, was rational, given the combination of a complex environment and our limited information processing capacities. Simon summarised the flaws he saw in SEU:

> The SEU model assumes that the decision maker contemplates, in one comprehensive view, everything that lies before him. He understands the range of alternative choices open to him, not only at the moment but over the whole panorama of the future. He understands the consequences of each of the available choice strategies, at least up to the point of being able to assign a joint probability distribution to future states of the world. He has reconciled or balanced all his conflicting partial values and synthesized them into a single utility function that orders, by his preference for them, all these future states of the world (1983, p 14).

These diverse objections by Simon point to different issues. The problem of synthesizing values points to the underlying issue of the *incommensurability of values*. If different values

are incommensurable then there cannot be a single underlying metric against which all values can be compared. This follows from the *logical* nature of values, rather than a psychological feature of human beings (although it is a psychological feature of human beings that we value a range of different things, giving rise to the logical problem). That a decision-maker cannot grasp all the alternatives and their consequences is a combination of the complexity and unpredictability of the world in conjunction with the limited cognitive abilities of human beings. A god-like being might be able to grasp all the implications of all the alternatives available but the *psychological limitations* of human beings make this an impossible task for us, unless our decision is related to an isolated, small-scale, predictable segment of the world.

Bounded rationality

Instead of the flawed Olympian view of SEU, a sensible decision-making policy to be adopted by a being with 'bounded rationality'(Simon, 1955) is to 'satisfice', choosing the first option that passes a threshold of acceptability rather than searching for the best possible option[i]. If the wider definition of a decision considered above is accepted the difficulties facing the Rational Choice Model are worse – is the decision-maker meant to completely understand the situation they are facing before they search for options, and after acting does the decision-maker need to constantly evaluate how the decision is working out? As a strategy satisficing has the virtue of cutting down the cognitive load by recognising that humans cannot canvass all alternatives, nor predict all their consequences, but it says nothing about how to ascertain facts and values, nor how to weigh incommensurable values.

Clearly the Rational Choice Model in its extreme form is impossible so no decision-maker should seek to do this. This objection is based on the Kantian claim that ought implies can; it can only be the case that the decision-maker ought to use the Rational Choice Model if the decision-maker can use it. And because of bounded rationality human beings cannot.

Rational decision making without unbounded rationality

However there is no reason to think that being rational requires unbounded rationality. To many writers it simply seems obvious that decision making is more likely to be successful if it involves some careful deliberation. For example Mann and Tan write that the "incomplete

canvassing of objectives, generation of few alternatives and superficial consideration of consequences is bound to compromise the quality of choices made in complex decisions" (1993, p 208). Following Simon's critique of the Rational Choice theory, Janis is careful to argue that 'Vigilant Decision Making' does not presuppose having complete knowledge of the consequences that will follow from every conceivable choice; rejecting a "rational-actor" model does not "necessarily preclude the possibility that the most effective policymakers engage in careful search for relevant information, critical appraisal of viable alternatives, and careful contingency planning" (Herek, Janis and Huth, 1987, p 204; see also Janis and Mann 1977 pp 21-25, Janis 1989 p29).

To argue that because decision-makers cannot carefully consider *all* alternatives that they cannot (and hence should not) carefully consider *some* or *any* alternatives is clearly a false all or nothing dichotomy, rightly rebutted by Janis. Choosing rationally is not being 'addicted to reason' (Elster 1999a). It is rational not to seek out all possible alternatives, assess all the consequences of the alternatives and so on, as there are opportunity costs, time constraints, and limits imposed by boredom and fatigue. On the grounds they are more confusing than helpful Janis (1989) avoids using the terms 'rational' and 'irrational'; instead he refers to 'high quality' and 'low quality' decision making. A high quality decision involves decision-makers "working to the best of their limited abilities, within the confines of available organisational resources, to exercise all the caution they can to avoid mistakes in the essential tasks of information search, deliberation, and planning" (1989, p 29). Stanovich (1999) has coined the term 'dysrationalia' for decision-makers who fail to be optimally rational through, for example, "lack of intellectual engagement, cognitive inflexibility, need for closure, belief perseverance, confirmation bias, over-confidence, and insensitivity to inconsistency" (Stanovich, 2009, p 2).

How one goes about deciding, how much time and effort are put into, for example, searching for options and assessing their likely consequences should be contingent upon factors such as the importance and difficulty of the decision, the available resources of time and energy, how easy relevant information is to locate, the abilities of the decision-maker, the volatility of the situation the decision-problem is embedded within and so on. Other things being equal, it is reasonable to spend more time and energy considering a decision that is important, provided it

is not unreasonable to believe that this investment is likely to significantly improve the decision[ii].

Nor does choosing rationally mean that most of the time and energy of the decision-maker should be devoted to the choice rather than other components of the decision. The decision-analytic methods such as decision trees and sensitivity analysis (see e.g. Goodwin and Wright, 2004), developed through the influence of the Rational Choice Model, focus on the choice; however these methods are time and energy consuming and this time and energy might be more profitably spent on other components of the decision. Smith makes a similar point when he argues that decision-analytic tools are "choice-centric" and although they seem impressive this is only because they "gloss… over the "hard-stuff"-defining problems, generating alternatives, identifying relevant values and contingencies, predicting outcomes" (2008, p 458). Using decision-analytic methods might also be inappropriate if it seems unlikely that the kind of probabilistic judgements these methods rely upon can realistically be made (Ennis, 1996).

Optimal (wise) rationality

Rather than assuming that a wise decision-maker needs to perform an unlimited search for information, Elster suggests three levels of optimal investigation (Elster 1999b)[iii]:

i) Means-end rationality: the action is rational in the sense that it is the best means of satisfying the desires/values of the agent, given his beliefs. This is a weak requirement of rationality as (to use Elster's example) wanting to kill x, believing that sticking pins in a doll will achieve this, and doing it is means-ends rational. The decision-maker can ask whether their beliefs and desires/values are reasonable given what else they know. This takes us to level ii).

ii) Belief and value rationality: the beliefs and desires/values themselves are rational in the sense that they are grounded in information now available to the agent. However, the information now available might be shaped by the distorting influences of mistakes and motivated irrationality. So, the decision-maker can ask whether the beliefs and desires/values are reasonable given what they could find out. This takes us to level iii).

iii) Information search rationality: the information acquired is optimal. The optimal amounts of time, energy, money etc., are spent, given the availability of information, the possibilities of changing beliefs and desires/values and importance of the decision.

Wise decision-makers will also want to take into account, where appropriate, the emotional consequences of loss of satisfaction through disappointment and regret, from pursuing a supposedly maximising rather than satisficing search strategy (Schwartz, 2004). Wise decision makers will also recognise that their phenomenological experiences are only one source of value (see above).

To allocate the optimal amount of time to invest does not require an unbounded rationality, in which decision-makers calculate the costs and benefits of pursuing information, and the costs and benefits of calculating the costs and benefits, and the costs and benefits of calculating these costs and benefits in a never ending sequence of calculations (contra Girgerenzer, Todd, and the ABC Research Group, 1999). Once it is recognised that optimal is a vague concept a good enough judgement can be made rather than a precise calculation (cf. Wittgenstein's analysis (1958) of the contextual nature of what is meant by being precise). For example a choice can be made once a decision-maker has developed a feasible option that promises to satisfy enough of their values.

Conclusion:
Wise decision making is trying to make the best decision possible (i.e. to maximise enlightened value) given the resources available for making the decision, including the time and energy spent making the decision.

3.2 Question 2: Does rationality = the use of reason?

The standard picture of rationality

If making high quality decisions that maximise value is the right goal of decision making then the question arises of whether this is accomplished through the use of reason. Given the dominance of the rational decision-making model within normative decision-making research it is perhaps unsurprising that emotions have tended to be ignored as this model has equated *rational* decision making with the use of *pure reason*, unmixed with emotion.

If normative decision making is assumed to be making decisions in accordance with the Rational Choice Model this involves a particular view of rationality, which has been termed the "Standard Picture". Samuels and Stich explain that "[a]ccording to this picture, to be rational is to reason in accordance with principles of reasoning that are based on rules of logic, probability theory and so forth" (2004, p 285).

The intuitive alternative to the standard picture

Klein has been an influential critic of 'rational' decision making, where rational is glossed as a mathematical operation that requires decision-makers to "define the evaluative dimensions, weigh each one, rate each option on each dimension, multiply the weightings, total up the scores, and determine the best option" (1998, p 29). Against this view he argues for the use of an intuitive model of decision making termed 'recognition-primed decision-making'. According to this model the decision-maker does rarely – and presumably should rarely [iv] - consider options or consciously makes choices, relying instead upon pattern-recognition to identify situations and appropriate courses of action (1998, 2003). Klein compares 'analytical sources of power' (statistics, logic, decision analysis) with 'experiential sources of power' (intuition through pattern matching and mental simulation). He maps this distinction onto research that humans have dual processing systems (Klein, 2003, p 284, footnote 2, references Sloman (1996), Stanovich (1999), and Hogarth (2001)).

Evans and Frankish (2009a) review current research into the dual processing theory, distinguishing between a default unconscious, intuitive System 1 that controls much of

behaviour and a more deliberative, flexible, but slower, conscious System 2 that can sometimes override the unconscious system.

Table 3: Features attributed to the two systems of cognition (based on Evans and Frankish, 2009b, p 15)

System 1	System 2
Evolutionary old	Evolutionary recent
Unconscious, preconscious	Conscious
Automatic	Controlled
Fast	Slow
Parallel	Sequential
Intuitive	Reflective
Associative	Rule-based

Klein notes (1998, p 295, footnote 2) that his approach is heavily influenced by Dreyfus' (1972) Heideggerian critique of the conventional artificial intelligence approach to decision making and problem solving. Dreyfus (1972), and more popularly Dreyfus and Dreyfus (1986), distinguished two poles in the history of philosophy. On one pole were rationalist philosophers such as Plato, Descartes, Hobbes, and Leibnitz who believed (wrongly, Dreyfus and Dreyfus argue) that thought could be explicitly broken down into basic elements and objective principles so that thought is calculation. On the other pole were philosophers such as Aristotle, Pascal, Hume and Heidegger who argued against the rationalists that decision making could not be "reckoning with parcels" or "calculating with bits" (Dreyfus and Dreyfus, p 2) because of the ambiguity and culturally embedded nature of practice and knowledge.

Challenging both the standard picture and the intuitive alternative

It is questionable whether 'two poles' is the most illuminating conceptualisation. Smith (2008) points out that rationality has tended to be construed too narrowly, and intuition too broadly as rationality has been construed in terms of deductive logic and utility maximisation and intuition as everything else – i.e. any choice not made through formal analysis and calculation. Smith points out that this means that rather mindless mechanisms of habit, or random selection

are conceptually lumped together with "the rich array of reflective thinking practices we use too make choices in our personal and professional lives" (p 460). This analysis is also broadly in line with the development of the critical thinking movement which, while not denying the importance of logic and probability theory, question their adequacy for the complexity of real-world reasoning; for example see Toulmin's influential analysis (1958), and Ennis (1996) and any number of other texts in critical thinking for a rich array of reflective critical thinking practices including, but not limited to, deductive logic and probability theory.

A danger of the two poles conception is that if the use of one pole is rejected, because an impossible Olympian rationality is required for choosing using Rational Choice, then the only other possibility is to use the other pole and rely on intuition. For example, Fineman (2003) seems to argue that as:

a) Simon has shown that rational decision making is not possible,

b) studies, such as Isenberg's (1984), show that managers say they make decisions intuitively, and

c) Damasio's research shows that gut feelings are required for effective decision making, …managers are right to make decisions on the basis of intuitive gut feelings.

This argument is based upon the assumption that rationality requires Olympian rationality, and that the only alternative to Olympian rationality is basing decisions *only* on intuition or 'gut feelings'. However that managers make decision on the basis of gut feel intuition (a descriptive 'is' claim) is of limited relevance to the conclusion that managers ought to (a normative claim) without research showing that better decisions result. The linking premise to move from 'is to ought' is appeal to Damasio's research into decision-makers who lack emotion and make poor decisions (1994), but to show that emotions are required for effective decision making is not to show that decision-makers should trust and rely upon their emotions. This claim is further explored in chapters four and five.

Furthermore given Smith's point about the overextension of the use of the term 'intuition' it is difficult to be certain what the managers mean when they say that they make decisions

intuitively. The term 'intuition' is widely used but confusingly in many different senses (Bastick, 1982; Goldberg 1983; Smith 2008). A quick method to analyse the concept into its different meanings is by showing what it is meant to contrast with.

Some meanings of 'intuition' through contrasts

i)   intuition versus deduction or calculation
ii)   intuition versus having verbalisable reasons (Klein, 1998, p 307),
iii)   intuition versus consciously worked out (perhaps the thinking frozen into habit of Simon, 1989),
iv)   intuition versus the scientific worldview (or the mysterious versus the non-mysterious),
v)   intuition versus noncreative thinking (intuition as the source of new ideas)
vi)   intuitive versus derived (an intuition in the philosophical sense of a foundational and perhaps incorrigible belief that can't itself be justified versus a belief derived from other beliefs)

Intuition and gut feeling

The term 'gut feeling' is also commonly used, and seems to be used with the same dangers of lack of clarity through ambiguity as 'intuition'. The usage seems to map closely onto meanings (ii) and (iii) of intuition above, perhaps with the additional components that the intuition is about a particular option or judgement, is made very rapidly (in a 'Blink' to borrow Gladwell's book title, 2005) based on unconsciously processed clues and consists of or is accompanied by an emotion of doubt or certainty, perhaps experienced phenomenologically in the gut. Something just feels wrong (doubt) or right (certainty). Some writers take a slightly wider usage and refer to not just a feeling of doubt or certainty but also particular emotions such as anger and elation when discussing gut feelings (e.g. Janis 1989 – discussed in chapter three).

Gut feelings can be understood as messengers between System 1 and System 2; situations are automatically and unconsciously analysed by System 1 processes and the result of these processes broadcast into System 2 as a feeling of doubt or certainty.

Advocates of intuitive decision making consider these gut feelings to be epistemically justified and pragmatically reliable, so decision-makers should follow their heart (System 1). Opponents of intuitive decision making consider these gut feelings to be neither epistemically justified nor pragmatically reliable, so decision-makers should instead follow their head, using System 2 to override these gut feelings. It is argued in chapters four and five that emotions tend to be more complex than this, that a far wider range of emotions than doubt and confidence are experienced for serious decisions, and that System 2 processes can also be used to explore and evaluate the messages in these 'gut feelings'. It is not a case of either following or overriding gut feelings, but instead using emotions as fallible resources.

A broader meaning to rational

So it seems that what 'being rational' means is open to misunderstanding. Robinson helps to clarify this possible misunderstanding by identifying two meanings of 'reason':

Sense 1) The use of one mental power, a special faculty

Sense 2) The general faculty of thinking well

In sense 1, reason is contrasted with "intuition, faith, belief, memory, imagination, emotion, sight, hearing, and touch". If reason is taken in this sense, a rational decision is one that excludes emotion and intuition, and a possible false opposition between reason and emotion, or reason and intuition is set up. Whereas, as Robinson points out, if "reason is understood as the general faculty of thinking then we can ask what is the best way of judging propositions and actions, and we can test intuition, emotion and so on [including reason in sense 1] to give them whatever weight seems reasonable" (Robinson, 1964). Taking reason in this wider sense (which is perhaps closer to the term 'wisdom'), means that being rational includes, as well as reason in the narrower sense, the appropriate use of intuition and emotion. If the distinction between System 1 and System 2 is accepted this implies determining how to make the best use of these resources[v].

Conclusion:

Being rational is making high quality decisions to maximise value. But being rational does not require that decisions are made through deduction and calculation alone, neither does it require the elimination of reasoning and the sole reliance upon intuition or emotion; rather decision-makers should draw upon whatever resources the human mind possesses that are effective in the production of high quality decisions.

3.3 Question 3: Does rationality = the effective pursuit of self-interest?

Rational Choice and self-interest

Rational Choice theory was initially offered within economics as both a normative account of how people should choose so as to achieve maximum utility and a description of how people do choose. Humans were assumed by the theory to be self-interested and efficient maximisers (Monroe, 1995).

Although the assumption of the pursuit of self-interest has often been a working assumption within *descriptive* economic models (Sen, 1977), this is an unnecessarily restrictive account of the Rational Choice Model as a *normative* model, as all that the Rational Choice Model advocates is the maximisation of value, not the maximisation of self-interested value (Elster, 2004; Hansson, 1994).

The appeal of the assumption of the maximisation of value in the Rational Choice Model, and that this maximisation is orthogonal to selfishness, is illustrated by Elster's example:

> An individual who wants to alleviate poverty will naturally want to choose the charity which will use his donation most efficiently. He will avoid charitable organizations with high overhead costs and those whose funds end up lining the pockets of dictators rather than helping the poor (Elster, 2004, p35).

Zey is concerned that accepting the Rational Choice Model leads to the view that decision-makers should only pursue purely economic values, a tendency she sees increasingly prevalent. She disapprovingly assumes that the Rational Choice Model underlies the politics of Reagan, and Thatcher with the result that:

> Using rational choice logic, many types of organisations-corporations, public bureaucracies, and voluntary associations-are being subjected to economic analysis in attempts to make them accountable or productive or competitive (Zey, 1992, p 9).

Zey further worries that the teaching of the Rational Choice Model encourages selfishness:

Students may perceive rational choice models not only as an explanation, but also as a justification for making decisions on rational bases only. That is, students make not only economic decisions, but also family and personal relationship decisions on a rational, self-interested, even narcissistic basis. Simply put, studying the rational choice models may have a normative effect on our students… Could it be that theories taught in economics prepare students to maximise their self-interest to the detriment of the collective? (Zey, 1992, p 27)

If organisations have focused too narrowly on economic efficiency, at the expense of other values, this shows a failure to make decisions to maximise a wider range of values – a failure of rationality (or perhaps more broadly wisdom), rather than a consequence of rationality. That studying economics might encourage selfishness, or an over-emphasis on economic efficiency at all costs, is perhaps a problem with the narrowness of an economics curriculum.

Evolutionary theory and self interest

The view that being rational is being self-interested derives some appeal from evolutionary theory, on the basis that 'survival of the fittest' implies a war of all against all where the fittest are those who are best able to maximise their self-interest. So, self-interest is an evolutionary given. There are several flaws to this argument.

First, it is not the case the evolution maximises; the most that evolution can do is improve (or 'tinker'), relative to the current evolutionary pressures, so an organism tolerably well-adapted to one environment might fail to effectively pursue its self-interest in another. Second, from an evolutionary standpoint it is open to question whose interests are being promoted as this depends upon the level at which evolution works; different possibilities that have been offered include the species, the individual or - the current position - the gene. For example, from the gene's point of view the organism should sometimes sacrifice its own long-term self-interest in favour of the interest of its relatives and its short-term self-interest in favour of its reciprocal partners (Trivers, 1971; Dawkins, 1976). Third, the human environment changes rapidly through cultural changes leading to a mismatch with the 'environment of evolutionary adaptedness' (Tooby and Cosmides, 1990, 2000) and hence a 'misfiring' of evolutionary adaptations, for example through the selection of high sugar and fat diets. Finally evolution does not 'care' about the well-being of organisms, only their capacity to reproduce, and this

might not coincide even with individuals' enlightened self-interest, let alone the interests of others (Dawkins, 1976, Stanovich, 1999 and 2004). There is no reason that the 'goals' of genes should be humanity's goals.

From unenlightened to enlightened values

Dawkin's (1976) described organisms as vehicles - 'lumbering robots' - serving the interests of their genes. In the human being evolution has produced an organism capable of reflectively choosing its own ends and 'rebelling' against evolution's 'goals' (James, 1890 chapter XXIV; Dawkins 1976; Gibbard, 1990; Stanovich, 2004). For Stanovich, "the first step in the robot's rebellion…is to learn how to properly value the vehicle and to stop behaviors and cultural practices that implicitly value our genes over ourselves. If we focus on the vehicle itself – put it front and centre – it immediately becomes apparent that a vehicle in which self regard has developed has no reason to value reproductive success above any other of the goals in its hierarchy" (Stanovich, 2004, p 26[vi]). In the terms used here humans can move from pursuing unenlightened to enlightened values.

Evolution has provided humans with a cognitive architecture that can unreflectively take in and rely on false beliefs and unenlightened values. According to Gilbert (1991) humans are Spinozan rather than Cartesian creatures. In the same way that our mental systems default mode is the automatic acceptance of perceptions so it is with beliefs. To comprehend is to accept; the subsequent testing and certification or 'unacceptance' of the belief requires mental work. Some of these beliefs are 'sticky'; 'memes' that are particularly good at embedding themselves in the minds of 'hosts' and propagating themselves across populations, regardless of their truthfulness or usefulness (Dawkins, 1976).

Figure 1: Gilbert's Model (1991, p109)

Two Conceptual Stages of the Spinozan and Cartesian Belief Procedures

	SPINOZAN PROCEDURE	CARTESIAN PROCEDURE
REPRESENTATION STAGE	Comprehension & Acceptance	Comprehension
	↓	↓
ASSESSMENT STAGE	Certification OR Unacceptance	Acceptance OR Rejection

These processes can result in tacitly living by unenlightened philosophies of life – 'worldviews' to use Lahav's phrase (Lahav, 1995) - or having 'infected mindware' (Stanovich, 2009a). There is a further catch as even if decision-makers reflectively hold the enlightened values they wish to live by their 'theories-in-use' (what they value in practice) can differ from their 'espoused-theories' (what they say and believe they value), and decision-makers can be oblivious to this (Argyris and Schon, 1974/ 1992). It is argued in chapter four and five that emotions can also lead unwary decision-makers to act on the basis of unenlightened values; for example acting from spite is unlikely to be a decision made on the basis of enlightened values.

Refuting the objection that values and desires cannot be evaluated

An assumption, taken from Hume, was that the only role for reason was instrumental, as "reason is, and ought only to be the slave of the passions, and can never pretend to any other office than to serve and obey them" (1740 bk. 2, part 3, sec 3). On this account our passions or desires (or in modern Rational Choice theory terms our 'preferences') are simply given, with reason setting the task of working out the means to these ends. Simon wrote, reflecting this conception, that "[w]e see that reason is wholly instrumental. It cannot tell us where to go; at best it can tell us how to get there" (1983, p 7). Thus there is no distinction between what we

happen to value (our desires) and enlightened values (what we value after experience and careful reflection) as it is impossible to deliberate about desires and hence values. Quite why this should be held is unclear; one possibility is the assumption that values derive from preferences/desires, preferences/desires derive from emotions and emotions are simply given and cannot be reasoned about[vii].

This view is challenged as it wrongly assumes that emotions are without intentionality (Solomon, 1993a). It is questionable that even Hume held this assumption. Hume's position was more subtle than is captured in the sound-bite quotation; he gave a role to reason to reassess the partiality of the 'passions' and to derive a general standard by which to conduct ourselves:

> Sympathy we shall allow, is much fainter than our concern for ourselves, and sympathy with persons remote from us much fainter than that with persons near and contiguous; but for this very reason it is necessary for us, in our calm judgements and discourse concerning the characters of men, to neglect these differences and render our sentiments more public and social…The intercourse of sentiments, therefore, in society and conversation, makes us form some general unalterable standard by which we approve or disapprove of characters and manners (Hume, 1751).

While an extensive discussion of the philosophy of desires and value is outside the scope of this chapter it is possible to note that there have been many philosophical critiques of the Humean conception of reason as the slave of the passions (e.g. Rawls, 1971; Brandt, 1979; Nathanson 1994, Nozick 1974, 1993; Griffin, 1986; Thagard and Millgram, 1997; Richardson, 1997). For example desires can be termed irrational if: after understanding their implications decision-makers would rather eliminate than fulfil them; they are based on false beliefs; they conflict with other desires or values and ongoing plans; fulfilling the desire is not satisfying; they are in conflict with interests, important for a range of goods and kinds of lives.

To give an example, Aristotle notes money only has value as a means (i.e. as an instrumental value), not as an end in itself so the ultimate end of decision making should not be the maximisation of economic efficiency (Aristotle, 350 BC/1980). Aristotle claims that humans have a psychological tendency to pursue means and forget the ends they serve and so, for

example, can end up in practice desiring and valuing money for its own sake (this is an example of a theory-in-use differing from an espoused theory, and consequently acting on the basis of an unenlightened value). As money is a limited resource, useful for many ends, its efficient use is important, but it must be asked efficient toward what end? Hitler's Germany was perhaps organisationally efficient but given the ends it was pursuing it would have been better if its managers were less efficient – no doubt the same can be said of many modern organisations, including Enron.

As a further example, Mumby and Putnam (1992), object to the limited and unenlightened range of values often considered in organisational action and in the structuring of organisations. Although they define 'rationality' as tied to the development of organisational practices of hierarchy and fragmentation they criticise, they appeal to instrumental rationality and developing enlightened values (without using these terms) when they argue for the reorganisation of work to bring about authentic 'work feelings' and minimise alienating 'emotional labour'. Indeed if one is concerned with how to improve the world, as Mumby and Putnam are, appeal to instrumental rationality and enlightened values is unavoidable.

Conclusion:
wise decision making involves maximising (according to what is pragmatically desirable) enlightened values both through effective means-end instrumental rationality and through assessing the ends pursued for whether they are based upon enlightened values.

4.4 Question 4: Does rationality undermine action?

Paralysis by analysis?

Klein (2003) defines "hyperrationality" as a "mental disturbance in which the victim attempts to handle all decisions and problems on a purely rational basis, relying on only logical and analytical forms of reasoning. In the initial states, this condition can be mistaken for a healthy development of critical thinking. Only later do we observe an unwillingness to act without a sound, empirically or logically supported basis. The final stages degenerate into paralysis by analysis" (1998, p 259).

Brunsson (1982) argues that rational decision making undermines motivation and commitment, because the search for a rational basis for decisions produces confusion and doubt. Given this, he claims that the Rational Choice Model lacks 'action rationality'. In a similar vein, Gladstein and Quinn criticise Janis' Vigilant Decision Making procedure arguing that an alternative that seems to have a lesser expected value payoff but is enthusiastically implemented with committed champions will often achieve higher gains for an organisation than an alternative with a higher calculated payoff but with less commitment within the organisation (1985). These positions rely upon the view that careful deliberation of alternatives creates doubt or reduces enthusiasm - an exhaustive search is also an exhausting process - and these negative emotions undermine commitment to any course of action so that inaction is 'chosen'.

Putting aside the possible confusion between rationality and hyperrationality these authors are creating a false dichotomy; a choice that is not acted upon is a poor decision, but committing to act on an unwise choice is also a poor decision. As with much decision making there are goals which might conflict; difficult tradeoffs need to be made between extensively searching for the best possible option and maintaining sufficient enthusiasm to act effectively.

The danger of over commitment

There is a converse to the problem of a decision-making process that fails to generate commitment to acting on the choice – one that generates too much commitment to the choice leading to inflexibility. On-going situations change, as do decision-maker's values, so

decision-makers need to be prepared to reconsider their choices. Gelatt argues that decision-makers need to adopt an attitude of 'positive uncertainty' where they embrace the fluid and uncertain nature of the world (Gelatt, 1989 and Gelatt and Gelatt, 1991). Krumboltz (1998) also argues that decision-makers need to be prepared to capitalize on unplanned-for events.

Committing to how to decide

A related point is that for decision-making procedures to work decision-makers must want to use them. Smith notes that, "For decades managers trained in decision-analytic methods declined to use them" (2008, p 458) and Jungermann and Schulz (1992) worried that decision-analysts would be "counsellors without clients".

Conclusion:

A wise decision procedure is one that decision-makers want to use *and* enables the identification of a good choice *and* enables the decision-maker to act upon the choice *and* reconsider the choice when appropriate.

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4. Issue three: The relationship between normative and descriptive accounts

4.1 Normative, descriptive and prescriptive accounts

Bell, Raiffa and Tversky distinguish between normative, descriptive and prescriptive accounts of decision making (Bell, Raiffa and Tversky, 1988). They define these terms thus: 'descriptive' is about "how … real people think and behave", 'normative' is about "how idealized, rational, super-intelligent people should think and act" (the Rational Choice Model), and 'prescriptive' is about what "an individual should do to make better choices … What modes of thought, decision aids, conceptual schemes are useful- useful not for idealized, mythical, de-psychologized automata- but for real people". These three modes can also be distinguished by how they are evaluated: the descriptive by empirical validity, the normative by theoretical adequacy, and the prescriptive by pragmatic value (the ability to help people to make better decisions).

Bell *et al.* illustrate these distinctions by example. Studies of pretend cancer patients suggest that people choose different treatments depending upon whether the choice is framed in terms of (logically equivalent) survival rates (the % who will survive if given a specific treatment) or mortality rates (the % who will die if given the same treatment)[viii]. While this is descriptively what people choose, normatively it is puzzling, as the informational content in both is the same, thus providing no epistemic grounding for different choices. The prescriptive challenge is how to help people to assess probabilistic information that is presented to them, so that a mortality or survival frame does not inappropriately influence them.

The use of 'normative' here is not how this author would use the term, as normative is normally taken to imply what should be done. A putative normative procedure that is unusable is not normative at all – decision-making models should be judged by pragmatic standards, by what works. A normative account must be pragmatic.

4.2 The role of descriptive accounts in normative-pragmatic accounts

The wise use of descriptive theory for normative-pragmatic accounts

Normatively-pragmatic accounts hold as an 'open question' (Moore, 1920/1993) whether descriptions of how people do make decisions are how people should make decisions. While there is a logical gap between normative and descriptive theories because, as Hume argues, 'ought' is different from 'is' (Hume, 1777), descriptive research can aid the quest for normatively pragmatic approaches to decision making, because, as Kant argues, ought implies can (Kant, 1785). There are several connections between the descriptive and the pragmatically normative:

a) *Modelling*: Observations of how people do make decisions can suggest how people should; through providing 'cautionary tales' about what to avoid, and 'exemplary models' to emulate.

b) *Knowledge of human capacities* can suggest:

i) *Limitations and biases in human functioning* – for example the attentional bottleneck of working memory limits the information humans can consciously attend to at any one time. The identification of human limitations and biases is important to the development of decision aids that might help humans to alleviate or surmount their limitations - a limitation need not be absolute block. For example the simplest way to try to get around the attentional bottleneck is to write material down so that it does not have to be held in an overcrowded working memory (see for example Franklin's Moral Algebra (MacCrimmon, 1973)). For decisions that require the manipulation of complex, quantitative data computers can help to overcome human computational limitations (Simon, 1977).

ii) The *kinds of mental resources* that human beings bring to decision making that, if used appropriately, can improve decision making - such as intuition (Hogarth, 2001) and emotions.

c) *Perspectives for understanding*: Knowledge of descriptive theories can provide 'frames' through which we can interpret the world, enabling us to make normatively better decisions. Allison, in his classic study of the Cuban Missile Crisis (Allison, 1971) identified three decision-making models (other divisions of models are possible; see Schwenk 1988, Sturdy, 2004, Schoemaker 1993, MacCrimmon, 1985):

- Model 1: the unitary rational actor. A decision is the result of a rational actor trying to achieve their goals.
- Model II: the organisational. A decision is the outcome of standard operating procedures, programs or patterns influenced by organisational routines
- Model III: the political. A decision is the outcome of political games of power and bargaining.

Decision-makers should strive to be, in Allison's terminology, Model I. It is not unreasonable to assume that decision-makers are more likely to do this effectively if they have a reasonable understanding of the situation they are facing, an understanding that can be aided by descriptive research into how decisions tend to be made. As, to use Allison's metaphor, a 'chess player', contemplating his moves during the Cuban Missile Crisis, Kennedy's aim of bringing about the best outcome (in this case avoiding nuclear war) could be improved by the using the 'lens' of descriptive theories. He needed to both understand the kind of adversary he was facing, so as to be able to make predictions of their actions and responses to his moves (were they Model I, II or III?), as well as the organisational structures (Model II) and political processes (Model III) constraining, and enabling, his own moves.

Similarly, interpreting the workings of an organisation through the lens of the 'garbage can' model (Cohen, March and Olsen, 1976) enables an astute decision-maker to identify how a 'solution looking for a problem' might be a poor choice. Nutt argues that the decision to build the Bay Area Rapid Transit system in San Francisco was a 'debacle' that resulted from the "use of a problem to justify an idea" without a clear analysis of either the point (the objectives and values) of the 'high-tec' transport system, or an adequate consideration of a range of alternatives to satisfy the objectives and values (1989, p 39)[ix]. Michael Portillo's criticism of a

trailed plan to tax cars by miles travelled, by fitting cars with an inboard computer sending information to a central database, as "technology looking for a use" is a similar insight[x].

On wrongly blurring distinctions between descriptive and normative-pragmatic accounts

Some authors wrongly blur the distinction between descriptive and normative, seeming to move from the claim that as the Rational Choice Model fails as a normative model, better descriptive models are needed (Hansson 1994, p 6). For example, Miller *et al*., after noting that Rational Choice Models have been the targets of sustained criticism, write,

> Although there are those who continue to call for attempts at synthesis and reconciliation of contradictions (Schoemaker, 1993), it has been suggested (Eisenhardt and Zbaracki, 1992) that it is time for theorists concerned with organizational behaviour to drop such models in favour of a more realistic approach to decision making, particularly one which recognises how it is imbued with power (Miller, Hickson, and Wilson, 1996, p 295).

What is meant in this quotation by 'realistic'? Realistic can mean 'normative-pragmatically possible' or 'descriptively accurate'. The argument in this text seems to illicitly move between these two meanings of 'realistic', creating the fallacy of equivocation. It is suggested that the Rational Choice Model is not 'normatively realistic' (because ought implies can), from which premise the conclusion seems to be drawn that the only alternative is 'descriptively realistic' research. This argument is a flawed attempt to move from an 'is' premise to an 'ought' conclusion – the normative model is flawed, so we ought only to do descriptive research.

Starbuck (1985) also seems to make a similar conflation of descriptive and normative, illegitimately arguing that from the premise that research shows that for example, top-level policymakers seldom engage in reflective (vigilant) decision making, even though they pay lip service to this approach and may retrospectively try to make it look as though they had been conforming to it, to the conclusion that the normative model is flawed. This argument is refuted by Janis (1987) and Lawrence (1985).

Many organisational theorists do not seem interested in normative approaches, perhaps because of the kind of confusions noted above. Bazerman, in a review of Shapira (1997), complains

that organisational decision making tends to be a purely descriptive subfield as it falsely assumes that its goal is simply to describe how organisational decision are made, and is limiting its relevance and influence by shying away from important but difficult research about how to improve decision making (1999). Similarly Milkman, Chugh and Bazerman note that most decision-making research has been descriptive and "propose that the time has come to move the study of biases in judgment and decision making beyond description and toward the development of improvement strategies" (2008, p 1).

A further source of confusion seems to be the claim that rationality is a "problematic concept" if people fail to be rational (Fineman, 1996). However rationality is a normative concept – it is to do with how we should think and act not with how we do think and act. To call a concept 'problematic' requires some standard against which to judge it as problematic; such a standard is, by definition, a standard of rationality (Nathanson, 1994). Fineman writes, "what we term rationality in organizations is a remarkable facility to present – to ourselves and to others – emotionalised processes in forms that meet 'acceptable', 'rational' images of objectives and purposes" (2000, p 12). 'Rationality' is used here as a form of spin; rationality is the presentation of reasonableness. Recognising that there is spin, and trying to appear reasonable, can only be accomplished if there is a standard of rationality against which to judge what is not spin, what is not reasonable. This standard need not be 'unemotionalised reason' as emotions can (fallibly) also be reasonable (see the chapter on emotions). Fineman is on stronger ground if he is offering a descriptive claim about what often occurs - emotion is often perceived as a source of irrationality so to avoid the accusation of 'being emotional' decision-makers try to present their positions as untouched by emotion.

> Conclusion:
>
> Wise decision making involves:
>
> a) Adopting normatively-pragmatic models; and
>
> b) Drawing upon descriptive research to understand the nature of the mind/brain, the psychology of self and others and how the world functions so that decision-makers can function more effectively. For example a wise decision-maker, being aware of the power dynamics at play (Model III), should carefully consider who to include in the decision-making process, how to create 'buy-in' etc., so as to try and bring about the best possible outcome.

Notes:

[i] Nor is satisficing the only alternative to full search: other ways to deliberately limit choices to a more manageable choice set include elimination by aspects (Tversky, 1972). Rather than choosing the first option that satisfies minimum criteria it is possible to narrow down the choice set by eliminating those options which fail to satisfy the most important criteria (or 'aspect'), then further narrowing down this set by comparing them to the second most important aspect: a process that can be continued until a choice is made. While they reduce the choice set to a more manageable number a drawback of both satisficing and elimination by aspects is that they don't allow for trade-offs, where a number of less important criteria combined overweigh more important criteria (Baron, 1944). Combined strategies of choice are possible: for example partial satisficing to produce a limited set of potential choices that seem to a least partially satisfy a range of important criteria, then selecting from within these by a more extensive search which seeks to maximise. It seems unlikely that there is a single best strategy, with optimal search depending upon the kind of information available, the number of criteria to be satisfied and their relative importance, the significance of the decision and the resources such as time, effort and money available for making the decision.

[ii] Beach and Mitchell (1978) and Payne, Bettman and Johnson (1993) refer to the adaptive decision-maker – although these writers do not claim that decision-makers are adaptive in the normative sense outlined above.

[iii] Elster limits his account to the assessment of beliefs, so it is an account of instrumental rationality only. However, similar considerations apply to the consideration of desires (or values) so they are included.

[iv] Klein, to this reader, is often unclear over whether he is making factual claims about what decision makers as a matter of fact do, or normative claims over what decision makers should do.

[v] There is a related broader meaning to 'cognition'. While it might be taken to mean conscious deliberate thinking a wider definition is any 'information processing' the brain/mind carries out, which would include intuition and emotion (Cosmides and Tooby, 2000).

[vi] A sentiment more colourfully expressed by Pinker that if his genes want him to have children they can go and jump in a lake (1997)

[vii] There are important differences between kinds of 'mattering' (values, preferences, desires for example) which are passed over quickly here (see for example Irwin and Baron, 2001)

[viii] This framing study is a reworking of Tversky and Kahneman's Asian Flu study (Tversky and Kahneman, 1985)

[ix] Research suggests that decisions are often made when only one alternative receives serious consideration (Mintzberg, Raisinghani, and Theoret, 1976; Nutt 1984); a normatively questionable procedure, especially if other alternatives can be easily investigated and promise to satisfy important values and objectives better.

[x] This comment was made on a political analysis program.

CHAPTER THREE: An Analysis of Structured Decision-Making Models

Chapter Contents

1. Introduction: Issues in Structured Decision-Making Models

1.1 Franklin's Moral (Prudential) Algebra

Benjamin Franklin is often taken as the historical source for structured decision aiding (MacCrimmon, 1973; Russo and Schoemaker, 2002; Hammond, Keeney and Raiffa 1999)[i]. Franklin, in answer to request for advice from his friend Priestly, wrote that, "In the affair of such importance to you, wherein you ask my advice, I cannot for want of sufficient premises advise you what to determine, but if you please I will tell you how". Franklin's suggestion for how is the method of "moral algebra", described in his letter thus:

> When those difficult cases occur, they are difficult, chiefly because while we have them under consideration, all the reasons pro and con are not present to the mind at the same time; but sometimes one set present themselves, and at other times another, the first being out of sight. Hence the various purposes or inclinations that alternatively prevail, and the uncertainty that perplexes us. To get over this, my way is to divide half a sheet of paper by a line into two columns; writing over the one Pro, and over the other Con. Then, during three or four days consideration, I put down under the different heads short hints of the different motives, that at different times occur to me, for or against the measure. When I have thus got them all together in one view, I endeavor to estimate their respective weights; and where I find two, one on each side, that seem equal, I strike them both out. If I find a reason pro equal to some two reasons con, I strike out the three. If I judge some two reasons con, equal to three reasons pro, I strike out the five; and thus proceeding I find at length where the balance lies; and if, after a day or two of further consideration, nothing new that is of importance occurs on either side, I come to a determination accordingly. And, though the weight of the reasons cannot be taken with the precision of algebraic quantities, yet when each is thus considered, separately and comparatively, and the whole lies before me, I think I can judge better, and am less liable to make a rash step, and in fact I have found great advantage from this kind of equation, and what might be called moral or prudential algebra (Hammond, Keeney and Raiffa, 1999, pp 84-85).

1.2 Why the need for a structured model?: the phenomenological perspective

The difficulty of decision making understood phenomenologically

Franklin's advice assumes that the source of 'stuckness' is that Priestly is unable to determine which of two possible courses of action is better because sometimes a set of reasons in favour of a particular course of action is uppermost in his mind, while at other times a different set of reasons, against the course of action, presents themselves to his consideration. Franklin bases his advice on what is surely a common phenomenological experience when undecided - preferences switching back and forth between different options. James describes the experience and resulting perplexity thus:

> The motives which yesterday seemed full of urgency and blood and life to-day feel strangely weak and pale and dead. But as little to-day as to-morrow is the question finally resolved. Something tells us that all this is provisional; that the weakened reasons will wax strong again, and the stronger weaken; that equilibrium is unreached; that testing our reasons, not obeying them, is still the order of the day, and that we must wait awhile, patient or impatiently, until our mind is made up 'for good and all.' This inclining first to one then to another future, both of which we represent as possible, resembles the oscillations to and fro of a material body within the limits of its elasticity. There is inward strain, but no outward rapture. And this condition, plainly enough, is susceptible of indefinite continuance, as well in the physical mass as in the mind (1890, chapter XXVI).

The solution of a generic structured approach

Decision-makers who observe their motives moving from being "full of urgency and blood" to "weak and pale", and their consequent 'to-ing' and 'fro-ing' between different favoured courses of action, can be left with little confidence in any choice. In order to help the mind settle on one course of action, Franklin advocates that Priestly follow a structured approach. Franklin seeks not to advise on the content of the decision, but rather offers generic advice on the process of decision making. To decide when one is stuck Franklin suggests two stages, with tasks for these stages. The goal of the first stage is to identify and capture all the 'motives' or reasons, while the goal of the second stage is to weigh the importance of these reasons against each other. To identify the reasons Priestly is encouraged to wait over three or four

days to see what "presents itself" to his mind, and, as reasons present themselves, to capture them by recording them under the relevant pro or con. After this allotted time the weighing of the pro and con options is carried out by cancelling out "motives" for and against that are judged equal, and hence to choose by seeing on which side the greatest weight falls.

1.3 Reasoning, intuition and human limitations in the structured approach

Reasoning and intuition

In this method, Franklin provides roles for reasoning and intuition. He infers from Priestly's letter that Priestly is stuck, having trouble choosing intuitively, but nevertheless intuition is used to provide the motives (where 'intuition' is used to refer to thoughts presenting themselves unbidden to our consciousness), and a kind of reasoned intuition is used to weigh the options, as the weight of the different reasons cannot be calculated with "the precision of algebraic quantities" - rather reasons are intuitively judged to be roughly equal (in this case 'intuition' is understood by contrast with 'calculated')[ii].

Human limitations

Franklin, like Simon after him (1955, 1983, 1997), recognises limitations to the human cognitive system and seeks to provide remedies to these limitations. Human memory is considered to be fallible so time is provided in order for different considerations to come to mind, which are immediately recorded so they are not lost again into the murkier recesses of unreliable memories.

The human mind is theorised as unable to intuitively balance a number of different reasons pro and con[iii], while writing them down allows the senses to aid the process. With them written down and displayed before them decision-makers can engage in the deliberate (if somewhat intuitive) weighing of reasons against each other, as a means to give all the considerations their due importance. Coping with human limitations in this way, Franklin believes, means decision-makers are less likely to choose based on a limited view of what is important.

Although written before these theoretical concepts were developed this advice can be seen as offering a 'debiasing' strategy (Fischhoff, 1982; Larrick, 2007) to potential problems with information provided by 'System 1' to 'System 2' (Stanovich, 1999) through the 'availability heuristic' (Tversky and Kahneman 1973).

1.4 Some limitations to Franklin's model and subsequent developments

Some limitations to Franklin's model
Wright and Goodwin (1999b) note that Priestly asked for Franklin's advice about a post, which he originally declined and then later accepted. Goodwin and Wright conclude that, "[c]learly, Franklin's 'prudential algebra' did not provide a simple, unequivocal solution to Priestley's job choice dilemma. We speculate that the cause of Priestley's inconsistency was that his values were unformed, or superficially formed, at the time he was considering whether to change jobs" (p 9). Goodwin and Wright are surely correct to point out that no unequivocal solution was immediately forthcoming but their explanation is only one among many possible. Another possibility is that changes to Priestly's on-going situation meant that at one time it was wise to decline and later to accept.

However although Franklin's method possesses a number of strengths, it provides no means for decision-makers to consider many of the components identified in the definition of a decision in chapter two. For example it assumes that the decision-maker:

i) Has clarity over what they are trying to decide about (their 'decision-problem')

ii) Understands the situation their decision-problem is located within well enough.

iii) Has identified a set of credible options to choose between.

iv) Has only two options to choose between (pros and cons used as Franklin advocates, works less well when they are multiple options, as it is difficult to compare across options when they have different pros and cons identified).

v) Can access all the values-at-stake ('motives') relevant to choosing intuitively by waiting to see what presents itself to the mind, and that these values are

enlightened and hence do not require assessment (what James, above, calls "testing
our reasons").

vi)   Is able to choose by an intuitive weighing of values, one against another.

vii)   Will be able to act wisely on the basis of their choice, without 'weakness of will' or
impulsivity.

If the decision-maker is stuck because they are unclear what they are trying to decide about, or
if the important pros and cons do not simply present themselves to the decision-maker's mind,
or if they cannot identify worthwhile alternatives, or if the number of alternatives precludes the
use of pros and cons, or if they cannot act on their choice then Franklin's moral algebra needs
supplementing with other help.

Subsequent developments in structured decision making
The structured decision-making models presented next provide wider coverage of the
components of a decision and hence provide greater flexibility. To provide a common language
these models are analysed in terms of stages, goals and tasks. A stage is a conceptually distinct
component of a decision, ordered by a logic of discovery, which has one or more goals, and
tasks designed to realise these goals. These models are broadly in line with the model of wise
decision making developed in chapter two.

2. Kepner and Tregoe: The Rational Manager

2.1 Introduction

Four Rational Processes

Kepner and Tregoe (1981) identify four 'Rational Processes' as the basis of effective decision making and problem solving. This section will cover all four of the processes as all are potentially parts of decision making according to the wide definition of a decision proposed in chapter two. Material will mainly be taken from Kepner and Tregoe (1981) and its updating by Spitzer and Evans (1997) and Altier (1999). Spitzer, Evans and Altier all worked for the organisation founded by Kepner and Tregoe to deliver training and consultancy based on the Rational Manager processes.

The wide applicability of the four Rational Processes

Spitzer and Evans argue these rational processes are critical thinking skills providing the foundation for all organisational effectiveness programmes:

> Critical thinking skills are the foundation on which all other organizational improvement practices and theories rest. Without an underlying competence in assessing complex situations, solving problems, making decisions, and planning for future problems and opportunities, an organization is unlikely to advance any other initiative successfully (Spitzer and Evans, 1997, p 11).

The four Rational Processes and the questions the processes are designed to provide an answer to:

1. *Situation Appraisal*: what's going on?
2. *Problem Analysis*: why aren't things going as we expected, and what can be done about it?
3. *Decision Analysis*: which course of action should we take?
4. *Potential Problem and Opportunity Analysis*: what lies ahead and how can we prepare?[iv]

The basic stages in each process are outlined below.

2.2 Rational Process 1: Situation Appraisal

The stages, goals and tasks of Situation Appraisal

The hub of the method is Situation Appraisal as only once a situation has been appraised is it possible to determine whether problem solving, decision making or potential problem and opportunity analysis is appropriate. Situation Appraisal consists of four stages. First, a list of potential concerns are identified, second, these concerns are explored to find out more about them, third, they are placed in order of importance and finally it is determined whether to use Problem Analysis, Decision Analysis or Potential Problem and Opportunity Analysis to deal with each particular concern.

There is a logic to the order of these components as concerns need identifying before more can be found out about them, enough needs to be known about them before they can be placed in order of importance and once this is done it is then possible to determine whether to engage in problem solving, decision making or potential problem and opportunity analysis. In accordance with the language suggested in the introduction to this chapter the components are referred to as stages, and goals and tasks of each stage are listed below.

Table 6: The stages, goals and tasks of Situation Appraisal[v]

Stages and Goals	Tasks
Stage 1. Recognising concerns (i.e. situations requiring action for which you have some responsibility) Goal: list of concerns	How to Identify Concerns: a) Specific programmed tasks, duties etc. lead to concerns about carrying them out b) Search for other concerns by: -List current deviations, threats and opportunities (e.g. where standards are not being met) -Review progress against goals -Look ahead for surprises (e.g. what major projects/plans are about to be implemented) -Search for improvement
Stage 2. *Separating concerns into manageable components* Goal: increasing understanding of concerns so that situations that require action are identifiable.	Find out more about concerns by asking: -Do we think one action will resolve this concern? -Are we talking about one or several things? -Why are we concerned about this? -What do we mean by...? -What do we see that tells us we must take action? -What is really troubling us about this situation?
Stage 3. Setting priorities Goal: determine which concerns should be dealt with and in which order.	Determine priorities by considering: -How *serious* is the current impact of the concern on productivity, people, and/or resources? -How much *time urgency* does it have? -What is the *probable growth* of the difficulty?
Stage 4. Planning resolution of concerns Goal: determine how these concerns can be best resolved by selecting which 'Rational Process' is appropriate (Problem Analysis, decision making or potential Problem Analysis).	Distinguish the type of Rational Process to use by determining: -Is there a deviation between expected and actual performance, is it the result of an unknown cause, and must the cause be determined to take action -> Problem Analysis -Does a choice have to be made among alternatives, or whether one alternative should be implemented? Do objectives need to be set? -> Decision Analysis -Is there an action to be taken? Is there a plan to implement? Is there a need to monitor an existing plan? -> Potential Problem and Opportunity Analysis

Is Situation Appraisal the hub?

The claim that Situation Appraisal must come first seems to be true of Decision Analysis and Problem Analysis more than Potential Problem and Opportunity Analysis which is more concerned with predicting the situation in the future than understanding the situation now. While Kepner and Tregoe claim that Situation Appraisal (what's going on now) proceeds the other three processes there seems no reason why Potential Problem and Opportunity Analysis cannot also lead to Problem Analysis and Decision Analysis as predicting what will happen in

the future should also trigger decision making and problem solving. Thus the hub should be extended to include appraisal of possible futures as well as what is going on now[vi].

The logic of the stages of Situation Appraisal

The different components in appraising a situation and their ordering make broad sense. However Stage 4 (Planning resolution of concerns) could come before stage 3 (Setting priorities) or at the same time, and in the case where a concern is a very high priority needing immediate action should do. A concern might even be seen as such a high priority at stage 1 that it should be dealt with straight away, without identifying and comparing with other concerns. This is likely in emergency situations and will often be realised intuitively, especially by those with expertise in the domain who might also immediately identify an appropriate course of action (Klein, 2003).

On the exhaustiveness of the processes

Is there a process for every eventuality? As a result of analysing a situation – and putting aside for now questions about the details of the processes - can all possibilities be accurately conceptualised as Problem Analysis or Decision Analysis or Potential Problem and Opportunity Analysis? A way to think about this is that actors are engaged in an ongoing plan or plans which can be:

      a) Failing to work effectively now (i.e. there is a deviation from what is expected) in which case Problem Analysis is required, or
      b) Fail to work effectively (or create opportunities) in the future in which case Potential Problem and Opportunity Analysis is required, or
      c) Re-evaluated (i.e. there is a change in expectations) in which case Decision Analysis is required.
      d) Working smoothly in which case no change is required.

More broadly it is possible to answer a 'how to' question ("how is it possible to accomplish x?"), or a 'whether to' question ("whether to try and accomplish x or not?"). 'How to' questions are concerned with overcoming problems and taking advantage of opportunities -

either in the present or future – to realise a plan, 'whether to' questions are concerned with deciding on a plan in the first place.

On this analysis Kepner and Tregoe have identified the fundamental processes (holding in question whether their realisation of these processes is the only or best way to deal with these issues). Problem Analysis however seems to be too narrowly defined as it requires only asking if the deviation between expected and actual performance is the result of an unknown cause - problem solving is still required if the cause is known as it still needs fixing. Altier captures this in suggesting that problem solving is required if there has been a past unplanned change – a deviation from the expected (Altier, 1999). The processes are more interdependent than perhaps initially appears, not least because problems and opportunities can suggest reconsidering plans to set a new direction and hence require decision making. This is covered below.

2.3 Rational Process 2: Problem Analysis

The stages, goals ad tasks of Problem Analysis

 If, after Situation Appraisal, the manager believes that the situation involves "any situation in which an expected level of performance is not being achieved *and* in which the cause of the unacceptable performance is unknown" (Kepner and Tregoe, p 34, emp. in original) then problem solving is called for. The problem-solving methodology advocated by Kepner and Tregoe can be analysed in terms of the stages, goals and tasks in table 4.

Is the problem solving process too mechanistic?

Many of the examples Kepner and Tregoe use in explaining their problem-solving process involve fixing machinery (see also Stryker, 2001a; Stryker, 2001b) and it could be argued that such a 'mechanistic' approach is best suited to machinery. However Kepner and Tregoe point out that many problems are people not doing what is expected of them and the same process can be used for people problems with the proviso that "you will need far more deftness in questioning, flexibility in approach, and plain tact than you will ever need in handling a hardware problem" (p 186). More contemporary writers would no doubt call this the need for emotional intelligence (Salovey and Mayer, 1990; Goleman, 1996). Patterson *et al*. provide a process for how to manage these 'crucial confrontations' with emotional intelligence (Patterson, Grenny, McMillan and Switzler, 2005). An advantage of the depersonalised nature of the process Kepner and Tregoe point out - no doubt Patterson *et al*. would agree - is that it treats people fairly and decently by making "full and objective use of the information available" (p 206), rather than relying upon personal prejudice.

Table 4: The stages, goals and tasks of problem-solving

Stages and Goals	Tasks
Stage 1. Defining the problem or "deviation statement" Goal: determining a good starting point for the analysis[vii]	State the deviation precisely, specifying one object or kind of object, and one malfunction or kind of malfunction (e.g. "number one oil filter leaking"). Make sure the statement cannot already be explained (e.g. not "oil on the floor" which can be explained by the oil filter leaking).
Stage 2. Describing the problem in detail Goal: become clear on the gap between what is and should be so that the possible cause can be identified	Describe the problem in terms of these four dimensions, distinguishing between what IS, and what IS NOT: -Identity (e.g. "it is number one oil filter, not number two and three that is leaking") -Location (e.g. "it is leaking here and not there") -Timing (e.g. "it leaks at this time and not at this time") -Magnitude (e.g. "it leaks this much and not this much")
Stage 3. Extracting key information from the four dimensions to identify key changes Goal: generate possible causes of the problem	Looking at the four dimensions ask what is distinctive about the IS and IS NOT data. For each distinction ask "Does this distinction suggest a change" (e.g. "does the timing point to an underlying change in what is happening between the different times, perhaps a part was replaced then"). For each change ask "could this change have produced the problem?" (e.g. "could the change in part result in a leak?)
Stage 4. Testing for most probable cause Goal: identify the true cause	For each possible cause ask "if this is the true cause of the problem, then how does it explain each dimension in the specification?" Select as the true cause that which explains each and every aspect of the deviation
Stage 5. Verifying the True Cause Goal: check it is the true cause and fix the problem	Test with additional information and action where possible – for example setting up an experiment to reverse the change to see if this undoes the problem

The (neglected) complex nature of problems

a) Lack of information content in the generic questions

A challenge to the process is the suitability of questions that Kepner and Tregoe advocate. It is no doubt true that of any problem it is possible to ask about its location, timing and magnitude and these are potentially important questions, although accepting only binary (IS or IS NOT) answers is surely limiting the information content.

Furthermore these questions are not fine grained and could be supplemented by questions specific to the kind of problem identified. For example, Patterson *et al.* (Patterson, Grenny, McMillan and Switzler, 2005) recommend that when a gap between what is expected and what occurs is detected for people problems the questions to investigate to map this gap should focus on understanding the person's strengths and weaknesses, the impact of their social relationships, and the organisational and environmental forces within which they are enmeshed.

As a reduction *ad absurdum* if the generic questions were all the rational managers needed to cope with any problem or decision then no book other than the Rational Manager would be required, and there would be no place for advice for understanding and responding to specific difficulties. The generic processes and questions are best understood as providing a framework within which other deliberations can be placed.

b) The information-rich and fast-paced world

Spitzer and Evans (1997) point out that the typical nature of problems has changed since Kepner and Tregoe wrote <u>The Rational Manager</u> suggesting some modifications to their methodology:

i) Due to the huge amounts of data routinely collected problem solving often doesn't require collecting more data but rather finding the relatively small proportion which can be converted into useful problem-solving information. Relevant information can be identified by clearly defining the problem and being guided by Kepner and Tregoe's questions about describing the problem.

ii) Due to the increased pace of activities and the consequent pressure for immediate action the first objective of problem solving is not to find *the* cause but rather to quickly cull possible causes, so that the situation is not made worse by trying to solve the wrong cause.

c) The fallacy of a 'root cause'

There is something more seriously wrong with Kepner and Tregoe's suggestion that there is one true cause, and that identifying this 'root cause' and fixing it is effective problem solving.

Gano (2003) notes that causes are always complex, and it is impossible to identify a 'root cause'. For a fire to occur, for example, there must be present an ignition source, combustible material and oxygen. Furthermore there is a causal history that explains why each of these contributing causes in present at a fire. Because of this, if the problem is that a fire occurred, fixing the problem requires not identifying the one true cause but rather understanding the network of causes and deciding how best to stop these three conditions for fires from co-occurring.

d) The complexity of systems

Spitzer and Evans, drawing upon Senge's <u>The Fifth Discipline</u> (1990), note that problems are typically no longer isolated malfunctions, but part of complex systems in which "everything is linked inextricably with everything else" (1997, p 45). This has the implication that if you change one part of a system this affects "every other part" and the 'obvious' solution might have unintended negative effects (Spitzer and Evans, 1997, p 146). Similarly Altier argues that while ""Problem Analysis" may be useful in determining why a particular person committed an initial criminal act or started using illegal drugs it is useless in attempting to come to grips with the macro problem of "crime in America" or "illegal drugs in America." Problems such as these are systemic problems; they require the use of the tools of systems thinking, of synthesis" (Altier, 1999, p 8-9)[viii].

The interrelationships of the processes

The complex and interlocking nature of difficulties implies that "the four critical thinking processes… - Situation Appraisal, Problem Analysis, Decision Analysis and Potential Problem and Potential opportunity Analysis - operate as a system" (Spitzer and Evans, 1997, p 157):

Figure 3: Interrelationship of the processes (1997, p 157)

After Situation Appraisal one of the three processes can be selected as the most appropriate. If Problem Analysis is chosen Decision Analysis can be used to determine which corrective action to take, and then Potential Problem and Opportunity Analysis used to "troubleshoot the implementation of the plan or to take advantage of new opportunities that have arisen because of it" (ibid, p 158). The double-headed arrows also indicate that in carrying out any of these processes the situation can be reappraised. Stage 4 of Situation Appraisal can be seen as decision making as a choice needs to be made about which concerns to respond to and how to approach them; or according to the wider definition of decision making proposed in chapter two all the components are part of decision making.

The iterative nature of the processes

This iterative approach refutes objections (Klein, 1998; Whetton, Cameron and Woods, 1996) that structured models such as Tregoe and Kepner's, require generating a well-defined problem space in which different parameters can be isolated, their predicted and actual values determined, and the cause of the difference determined to identify the cause of the problem. Klein and Spitzer and Evans agree that effective action is 'non-linear' and often requires iterating back to earlier stages as further factors come to light, and to search for leverage points in diagnosing the problem, rather than seeking a complete problem description before any action can be taken.

The confluence of ideas can be illustrated by comparing Spitzer and Evans model with Klein's problem-solving model:

Figure 4: Klein's account of problem-solving process (1998, p 122)

A criticism sometimes raised against structured decision-making methods, and in particular the view that the components can be logically ordered as stages, is that the world is not 'linear' (e.g. Klein, 1998; Mintzberg, H., Raisinghani, D., and Theoret, A. , 1976). Kepner and Tregoe are careful to point out that flexibility is required, and that the process is iterative, due to the changing nature of on-going situations. They note that:

> These four stages do not form a lockstep sequence. If we had all the information about every concern, as soon as we had recognised it, and no new concerns came up until we had resolved all those on our list, this would be the

logical sequence to follow. In reality, however, new information is constantly coming to light. No sooner do we start the analysis of our highest priority specific concern, than someone rushes in to tell us that the problem has been solved or that someone has discovered that it is really two or three smaller problems. When this happens, a new list of concerns must be made, more separating questions asked, priorities reset. Each situation may demand a different order and combination of Situation Appraisal techniques (1981, p 166)

The processes as an aid in fast-paced environments

A related criticism is that in a fast-paced world there is no time to carry out a structured process. While this is no doubt sometimes true Spitzer and Evans (1999) argue that it is precisely because there is a fast-paced world that a structured process should be used to clarify what thinking needs to be done, and to think in the most productive and time-efficient manner, a point supported by Bruch and Ghoshal's research to be wary of the busy but unfocused manager (2002). Spitzer and Evans note that some decision-makers are able to carry this analysis out 'intuitively', further speeding up the process.

2.4 Rational Process 3: Decision Analysis

The stages, goals and tasks of Decision Analysis

If, after Situation Appraisal, the manager believes that a concern requires making a choice among alternatives Tregoe and Kepner advocate the procedure of 'Decision Analysis'. They claim that a good choice is more likely to result by following four stages with goals and tasks, again with these stages having a sequential logic. The first stage is to clarify what the decision is and its objectives, second alternatives and their benefits are identified, third the risks to these alternatives are identified and finally the choice is made by balancing risks against benefits.

Table 5: The stages, goals and tasks of Decision Analysis[ix]

Stages and Goals	Tasks
Stage 1. Clarifying Purpose Goal: clarity over what the decision is about and its objectives	Determine the level and produce a clear statement of the decision to be made. Identify and list objectives by answering: -What specific goals should be met? -What needs must be satisfied? -What are the limitations? -What are short and long term objectives? Order objectives in importance by determining: -Which are MUSTs and which WANTs -What is the relative weight of the WANTs
Stage 2. Finding and Evaluating Alternatives Goal: find likely alternatives	Find alternatives: Alternatives can be given (for example by more senior management) or generated. Alternatives are generated by using any method that releases creativity. Evaluate alternatives by asking: -Is information as specific, complete and up-to-date as possible? -Does each alternative meet the MUST objectives? -How well does it meet the WANT objectives?
Stage 3. Assessing risks Goal: test alternatives for risks	Imagine the alternatives have been selected and determine how they might go wrong by asking: -What are the implications of being close to a MUST limit? -Where might information be invalid? -What problems could we have if we implemented this alternative? Judge the seriousness of the risks by asking: -How serious would each adverse consequence be if it did occur? -How likely is each adverse consequence? -What actions can we plan to prevent or minimize the effect of each adverse consequence?
Stage 4. Making a decision Goal: choose the best alternative	Weigh the risks against the benefits and ask: -Are we willing to accept the risks to gain the benefits? -Can we live with the degree of risk inherent in this alternative?

Considering the level

The 'level' refers to the scope or frame of the decision, and hence the values and alternatives that are considered. This is best explained through illustration. Altier (1999) provides the following. A decision might be framed as "choosing a corporate jet", which will have values/objectives such as time spent travelling, comfort, costs and so on, and the alternatives will be different types of jet. However a higher level frame could be set as "choosing the best way to provide for executive's remote transportation needs" or an even higher level as "choosing the best way(s) for top executives to be in effective communication with distant or remote locations". These higher levels do not imply that a corporate jet is the only kind of option and different values and objectives become at stake. Altier recommends setting the level as high as possible in terms of the net effect the decision is designed to achieve as lower levels will preclude possible alternatives, although this needs to be balanced against wasting time through considering issues already known that have led to the framing of the decision at a lower level.

Who should be involved in the analysis?

Spitzer and Evans add a last stage, important when there are multiple stakeholders, which is identifying the key people to involve in the further analysis. People should be involved if they have important information and/or skills that can improve the analysis, an important role in carrying out the resulting action and hence need to buy into it, or if taking part aids their professional development. To determine who to include decision-makers need to answer these key questions:

- Who should be involved to provide information, to contribute to the analysis, or to take responsibility for conclusions reached?
- Who should be involved to ensure commitment to the action?
- Who should be included as part of their own training?

In addition, to prevent uncoordinated action through misunderstandings, it should be specified what help they will provide and when, and how information will be collected, documented and presented –who does what[x].

Difficulties in treating objectives as MUSTs

Conceptualising objectives as MUSTs, has the advantage of emphasising their importance - or even critical nature - and can encourage creative searching for how to satisfy these objectives. However specifying MUSTs has two drawbacks, one practical and one theoretical.

The practical drawback is that it is empirically possible that no option (including doing nothing) is able to satisfy all the MUSTs, or minimum requirements. A decision still needs to be made but the realisation that all MUSTs cannot be satisfied might paralyse further thought and action. To avoid this objection these values and objectives can be conceptualised not as MUSTs but as VERY IMPORTANTs, and determining which are most important can help break a tie that is paralysing choice. Kepner and Tregoe perhaps recognise this problem in their question "What are the implications of being close to a MUST limit?"

The theoretical objection is that this approach is noncompensatory, and it is possible that a larger number of WANTs might outweigh a smaller number of MUSTs (or VERY IMPORTANTs) in overall value (Baron, 1994)[xi].

2.5 Rational Process 4: Potential Problem and Opportunity Analysis

The stages, goals and tasks of Potential Problem and Opportunity Analysis

The process of Decision Analysis can lead into Potential Problem and Opportunity Analysis. If, once the manager has completed the above stages, experience or gut feeling tells them that something might go wrong with the plan, Potential Problem Analysis can be used as a final stage of Decision Analysis (Tregoe and Kepner, 1981, p 155).

Tregoe and Kepner (1981) list only Potential Problem Analysis, which Spitzer and Evans (1997) supplement with Potential Opportunity Analysis[xii]. The structure provided by Spitzer and Evans will be followed, with additional material from Tregoe and Kepner.

Table six contains the stages, goals and tasks of Potential Problem and Opportunity Analysis.

Does this lead to paralysis by analysis?

Kepner and Tregoe and Spitzer and Evans come sometimes be read as suggesting that all potential problems need to be listed, their probability and seriousness calculated, and only on this basis sensible action taken; this reading leads to the criticism of paralysis by analysis (Klein 1998). There is evidence for this interpretation when, for example, Kepner and Tregoe suggest that for each potential problem it should be asked i) what can be done to prevent the problem from arising and ii) what can be done if the problem arises.

A nuanced, charitable reading suggests otherwise. Kepner and Tregoe note that it is often wrong to note every potential problem as this would produce a list of "fearsome length" and this can a) obscure the most important problems and b) be so overwhelming that all potential problems are ignored (p 156-7). Similarly Spitzer and Evans note that: "The amount of time we devote to Potential Problem and Potential Opportunity Analysis depends on the situation. In many cases remembering to ask a few key questions is all that is needed. In complex and unfamiliar situations, on the other had, we often find it necessary to conduct a formal, step-by-step analysis, drawing on the expertise of others in the organization and making the complete plan visible" (p 271)[xiii].

Table 6: The stages, goals and tasks of Potential Problem and Opportunity Analysis

Stages and Goals	Tasks
Stage 1. Identifying potential problems or potential opportunities Goal: list of specific serious problems/opportunities and checkpoints	Produce concise statement of the action to be taken. Specify the actions needed to be taken to reach the intended goal by: - listing chronologically, and/or - using planning techniques such as breakdown structures, network diagrams, Gantt charts etc Ask where the plan is most vulnerable (use experience, judgment and common sense) by: - asking generic questions ("what problems could this action cause?) - focusing on likely stress points (e.g. shared responsibilities and overlapping authority, little experience, complex interface of people and machines, tight deadlines…) - specify the what, where, when and extent of potential problems, being specific Look for potential opportunities by: - asking what opportunities might be found and unintended benefits could be created Assess probability and seriousness of potential problems, and when to check for their occurrence
Stage 2. Identifying likely causes Goal: list of specific causes that trigger highly probable and serious problems and opportunities	Identify likely causes by asking: - what specifically would cause the potential problem or opportunity? - what other causes could bring this about?
Stage 3. Taking preventative or promoting actions Goal: stopping problems from occurring, enabling opportunities to occur	For each specific cause ask: - what can be done to prevent the cause from occurring, or reduce its likelihood, or stop it creating the potential problem - what can be done to enable the cause to occur, or increase its likelihood, and ensure it will create the potential opportunity
Stage 4. Planning contingent or capitalizing actions and setting triggers Goal: realising when problems and opportunities occur to respond effectively	For likely causes ask: - what actions can be taken to minimize the damage (problems) or maximise the benefits (opportunities) if they occur? - how can it be known the problem or opportunity has occurred?

The role of expertise

The use of questions such "what can go wrong?" and "what can we do about it?" combine a generic process with experience and expertise. While the question is a generic one that everyone can ask of their plans, the kinds of answers that decision-makers generate will depend upon their experience and expertise; those will previous experience in the area are perhaps more likely to identify possible problems. Research into expertise implies that

sometimes experts' intuition might enable them to 'see' what might go wrong, and how to fix it, without the need to even ask these questions (Simon, 1989; Klein, 2003). Given the fallibility of expertise and how expertise can also lead to prejudgment these expert judgements can also be tested (see also Schoemaker and Russo, 1993).

Using Innocence and Scenarios

Rather than relying on expertise De Bono identifies 'Innocence' as a source of creativity: "If you do not know the usual approach, the usual solution, the usual concepts involved, then you may come up with a fresh approach. Also, if you are not inhibited by knowing the constraints and knowing what cannot be done, then you are more free to suggest a novel approach" (De Bono, 1993, p 43)[xiv].

A further technique to help with problem and opportunity spotting, not covered in the writings of Kepner and Tregoe and their followers, is the use of 'Scenarios'. To cope with the unpredictable nature of the world scenarios can be developed of different possible futures, enabling the decision-maker to be alert to identifying changing circumstances and ready to reconsider their course of action and act on the basis of these changes (e.g. van der Heijden, 2004)[xv]. Wright and Goodwin (1999) argue that due to the human tendency to belief overconfidence and confirmation bias (with the resultant failure to update mental models about the world and hence irrational inertia in strategy choice) scenario planning should be a required part of management decision making.

2.5 The role of emotions in the process

Some use of emotions for the Rational Manager

Although Kepner and Tregoe make limited mention of the role of emotions and provide no theoretical analysis of emotions some questions designed to find out more about the situation decision-makers and problem-solvers face have a more or less explicit emotional content: what is troubling us; what surprises are anticipated; what concerns do we have.

It perhaps implicit in the experience of concern that without emotions there is no motivation to engage in any of the processes at all:

> Whatever the details of the situation, the first step in Potential Problem Analysis is to feel concern for the future of some project, situation, or event. This is a matter of attitude and motivation. It is the kind of concern that presses us to begin thinking about potential trouble spots, about our experience in similar situations, and about what we can do to prevent or mitigate problems that have occurred in the past and are likely to occur again (Kepner and Tregoe, 1981, p 143).

No suggestions are offered if concern is not felt about how to feel it (an issue that Janis tackles). Gut feeling is also used to provide information if something might go wrong with a plan, and assess options:

> To set aside feelings, instincts, and the inner voice that says, "I don't feel right about this…" is to throw away a valuable resource. It leads to such errors as hiring a person you don't like and can't work with just because "the resume looked so good, and I was trying to be objective."…a good decision always depend[s] on thorough study and careful evaluation of *all* relevant information (Kepner and Tregoe, 1981, p 90)

Quite what decision-makers should make of gut feelings is unclear – they are a source of information but what weight should be given to them if they conflict with other sources of information? No analysis is offered of what gut feelings are, nor whether and to what extent they should be trusted, nor of whether they can be assessed.

Altier claims that clients he worked with using the Kepner-Tregoe procedures "had major problems that they hadn't been able to solve, major decisions in which opposing organizational camps had let their emotions override their process training" (Altier, 1999, p viii). Altier argues that "What is bothering you?", "What could be going better?" and "What concerns do you have?" should not be used as questions – rather questions to use are "What is going differently from expected?" and "If present trends continue, where could things go?". The rationale given for this is that the former questions "all imply value judgments. They use words like "bother" and "better"; they tap emotional reactions and personal views and idiosyncratic estimates of worth". This is a mistake "because the object is not to gauge how you or someone else feels about a situation or whether the situation is better or worse, but whether that situation has a marked potential or need for change" (*ibid*, p 29). While bringing up emotions might go well or badly the argument that emotions shouldn't be approached as they imply value judgements is flawed as decision making is inevitably about values (as argued in chapter two).

Despite Altier's official position on emotions as undermining the Rational Processes, clues to a positive role for emotions can be discerned in a slice of autobiography he presents. Altier explains that he decided to change from providing training in the Kepner-Tregoe methodology to consultation work using their tools, because he was "*disenchanted* with the repetitiveness of conducting training programs" (1999, p viii, emp. added). Disenchantment is one way of being troubled (What is bothering him? - He is feeling disenchanted). Plausibly there are other layers to disenchantment than simply boredom with repetitiveness - disenchantment perhaps implies a lose of faith in something one had built important aspects of one's life around and probing this emotion could caste valuable light on how well conducting the training was fulfilling Altier's values. Once he began consulting Altier found the work "exciting" and he "thoroughly enjoyed" it – perhaps suggesting that important values are now being fulfilled.

3. Janis: Vigilant Decision Making

Introduction

Janis, with various colleagues, has developed a model of 'Vigilant Decision Making' with 'Prescriptive Norms', offered as the best way to make serious decisions, a 'Conflict Model' to explain why decision-makers do not always adopt Vigilant Decision Making, and a set of 'Special Procedures' to overcome difficulties identified in the Conflict Model and encourage Vigilant Decision Making[xvi]. Janis also outlines a set of 'Emotive Rules' that can either undermine (mostly) or aid (occasionally) Vigilant Decision Making.

This section will draw mainly on Janis and Mann (1977), Wheeler and Janis (1980), Herek, Janis, and Huth (1987), Janis (1982a, 1983) and Janis (1989).

3.1 Vigilant Decision Making

The stages, goals and tasks of Vigilant Decision Making

Janis argues that decision making is most effective when made 'vigilantly'. Vigilant Decision Making is theorised as consisting of the five stages, goals and tasks in table seven[xvii]:

Some oddness to the stages

There is some oddness to the stages, as is evidenced by the difficulty this author had in specifying the goal of each stage. In some cases there are multiple goals – for example stage 2 is to do with both identifying alternatives and values (although it is only named 'searching for alternatives'). In other cases there is some repetition – for example the Balance Sheet appears in two different stages and it is not clear what there is meant to be different in its use at these two points.

Table 7: The stages, goals and tasks of Vigilant Decision Making

Stage and Goal	Tasks
Stage 1. Appraising and accepting the challenge Goal: Become aware of the nature of the challenge and begin to respond to it	To appraise the challenge need to investigate: i) How credible is the information? ii) How important is the threat? iii) How urgent is the threat?
Stage 2. Searching for alternatives Goal: Develop a list of alternatives and a list of values	Search for alternatives by: - using how questions - 'brainstorm' by: avoid evaluation at the beginning; generate as many alternatives as possible; try to be original (try a few 'far out' possibilities); modify flawed alternatives; ask other people; engage in free-floating contemplation; avoid dichotomies Search for goals/values by using: - why questions - value clarification exercises[xviii] - a 'Balance Sheet' to find values for alternatives based on: a) Utilitarian gains or losses to self (e.g. income, security, interest) b) Utilitarian gains or losses for significant others (e.g. income, status, time available) c) Self-approval or disapproval (e.g. self-esteem from contributing, ethical justification, originality) d) Approval or disapproval from significant others (e.g. praise, admiration)
Stage 3. Evaluating alternatives Goal: Gain an understanding of what the alternatives imply	Using a 'Balance Sheet' or 'Report Cards'. To understand the alternatives build 'scenarios' by imagining the future best, worst and likely cases[xix]
Stage 4. Deliberating and becoming committed Goal: Choose an action, and act on it	Make the decision based on: 'informed intuition' - intuitive (non-calculated) judgment of where the greatest weight lies - informed by the listing of pros and cons of options and ordering goals/values in terms of importance. Check that the final decision and the process to reach it feels right. Use scenarios to make explicit contingency plans for what to do if things don't work out. Take minor steps to commitment (tell people, make preparations, act) to help overcome the psychological barrier to acting on difficult choices, and refine plans to meet barriers.
Stage 5. Adhering to the decision (despite negative feedback) Goal: Overcome setbacks and review the decision	A honeymoon period is followed by new threats, opportunities and temptations. Whether these will lead to a new decision-making process depends upon both the strength of negative feedback and also the capacity to tolerate negative feedback. Ask is the decision still best, all things considered.

3.2 The Prescriptive Norms

The norms

While working through the stages of Vigilant Decision Making Janis advocates following seven procedural criteria or Prescriptive Norms, theorised to increase the decision-maker's ability to use the information available effectively and hence improve the likelihood of good outcomes.

Janis and Mann (1977) present the norms in their positive formulation of what to do (the left hand column in the table below), while Herek, Janis and Huth (1987) offer the negative formulation of what to avoid (the right hand column). The negative formulation has two levels, complete absence (e.g. failure to consider objectives at all) and severely limited use (e.g. objectives are considered only briefly and cursorily).

Table 8: The Seven Prescriptive Norms[xx]

	Norm to Follow	How Not to Follow the Norm
1.	Thoroughly canvas a wide range of alternatives.	Failure to consider a number of alternatives, either concentrating on the course of action preferred from the outset or confining deliberation to only one alternative. If any other alternatives are considered they are immediately excluded.
2.	Take account of the full range of objectives to be fulfilled and the values implicated by the choice.	Objectives never explicitly considered, or given such a brief and cursory consideration that the decision maker fails to take into account a number of the major goals or values implicated by the choice.
3.	Carefully weigh whatever is known about the drawbacks, the uncertain risk of negative consequences, as well as the positive consequences that could flow from each alternative.	Failure to consider the negative consequences of preferred alternative or examined so incompletely that a number of important negative consequences are overlooked even though information about those consequences is available.
4.	Intensively search for new information to further evaluate alternatives.	Failure to obtain information necessary for evaluating the pros and cons of the preferred and other alternatives. If information search is engaged in at all it is in such a perfunctory and incomplete manner that it fails to obtain a number of important pieces of information that are available.
5.	Conscientiously take account of new information or expert judgement exposed to, even when this does not support the course of action initially preferred.	Tendency to accept new evidence only when it supports the preferred alternative with the result that nonsupporting evidence is ignored or refuted.
6.	Re-examine positive and negative consequences of all known alternatives, including those originally regarded as unacceptable, before making a final choice.	Failure to re-examine the consequences of previously considered alternatives, or rejected alternative are re-examined in a biased manner by discounting favourable information and giving disproportionate weigh to information about their negative consequences.
7.	Make detailed provisions for implementing and executing the chosen course of action, with special attention to contingency plans that might be required if various known risks were to materialize.	Possible problems in implementation are ignored and monitoring and contingency plans are not developed; or implementation, monitoring and contingency plans are considered in such a vague and incomplete manner that a number of important difficulties or contingencies that are likely to materialize are overlooked.

Prescriptive Norms relate (mostly) to particular stages of Vigilant Decision Making

While offered as generic norms operating over the whole procedure, these procedural norms are more naturally conceptualised as tied to particular stages of decision making:

Table 9: Prescriptive Norms and the stages they apply best to

Norm	Applies best to stage…
1. Thoroughly canvas a wide range of alternatives.	2 - finding alternatives
2. Take account of the full range of objectives to be fulfilled and the values implicated by the choice.	4 - deliberating about the choice
3. Carefully weigh whatever is known about the drawbacks, the uncertain risk of negative consequences, as well as the positive consequences that could flow from each alternative.	4 - deliberating about the choice
4. Intensively search for new information to further evaluate alternatives.	3 – evaluating alternatives
5. Conscientiously take account of new information or expert judgement exposed to, even when this does not support the course of action initially preferred.	3 – evaluating alternatives (although could also apply to any aspect of the decision)
6. Re-examine positive and negative consequences of all known alternatives, including those originally regarded as unacceptable, before making a final choice.	4 - deliberating
7. Make detailed provisions for implementing and executing the chosen course of action, with special attention to contingency plans that might be required if various known risks were to materialize.	Suggests an extra stage or an extra part to stage 4

Perhaps the fact that these Prescriptive Norms are offered as generic is meant to suggest that, although the procedure is set out as stages, as the decision-maker explores their decision-problem iterating back to earlier stages is required so that, for example, a wide range of options is canvassed.

Do the Prescriptive Norms imply unbounded rationality?

These Prescriptive Norms can be read as being, to use Elster's phrase "addicted to reason" (1991, p 295). Decision-makers should for example, *thoroughly* canvas a *wide* range of alternatives, take account of the *full* range of objectives to be fulfilled and re-examine positive and negative consequences of *all* known alternatives.

A charitable reading of these Prescriptive Norms is that this should be done appropriately in accordance with the account of wise decision making in chapter two. The negative formulations of the Prescriptive Norms suggest less emphasis on absolute comprehensiveness. Herek, Janis and Huth (1989) note that in studies investigating the decision-making process the negative criteria produce higher inter-rater agreement because, when making decisions under time pressure and limited resources, it is difficult to specify the point of diminishing returns, when after "a great deal of work already has been done…it [is] no longer worthwhile to procure and process additional information, explore additional alternatives, make additional contingency plans, and so on" (p 447, footnote 1). There can be much greater agreement on when not enough has been done, than when the optimum amount has been done.

Empirical evidence for Vigilant Decision Making and Prescriptive Norms

In an extensive study Herek, Janis and Huth (1987) looked at nineteen US post world war two policy decisions, and examined correlations between the number of symptoms of non-Vigilant Decision Making, and the outcomes of these decisions. According to blind-to-hypothesis experts' judgments of the short-term affects of these decisions, higher symptom scores (also scored by a blind-to-hypothesis judge) were related to both more unfavourable outcomes for U.S vital interests ($p < 0.002$) and immediate unfavourable outcomes for international conflict ($p < 0.002$)[xxi].

3.3 The Conflict Model

Triggers to coping strategies

According to Janis the need to make a decision arises when a decision-maker is confronted with a challenge or opportunity and has opposing tendencies to accept and reject a given course of action. While decision making is theorised to be best approached vigilantly this is often not the case as in reality as man is "a reluctant decision maker – beset by conflict, doubts, and worry, struggling with incongruous longings, antipathies, and loyalties, and seeking relief by procrastinating, rationalizing, or denying responsibility for his own choices" (1977, p 15). Janis claims that although Vigilant Decision Making is within the repertoire of most decision-makers (Janis and Mann, 1977; Janis 1987), it is rarely used and decision-makers are prone to revert to the less effective coping strategies of complacency, defensive avoidance and hypervigilance.

Janis began by studying the effects of stress in emergency situations and from these developed a general model - the 'Conflict Model'- that he applied to all consequential, serious decisions (Janis and Mann, 1977, chapter 3), whether in a personal (e.g. career choices) or professional and organisational capacity (e.g. the executive steering his organisation; the politician formulating policy). The Conflict Model applies for any decisions that "evoke at least a mild degree of worry about the outcome" so that the decision maker has "hot cognitions" (ibid, p 75).

The Conflict Model postulates a central role for stress (by which Janis seems to mean levels of anxiety); when stress is either too low or too high decision-making effectiveness suffers because of reduced cognitive processing. When the decision-maker is moderately stressed it is possible to follow the high cognitive processing, 'vigilant' process (Janis and Mann 1977, Wheeler and Janis 1980)[xxii].

The two major sources of the stress are concerns over potential serious material and social loses and loss of reputation and self-esteem as a competent decision-maker. The results of this

stress are vacillation, hesitation, and feelings of uncertainty whenever the decision comes to the focus of attention.

The Conflict Model

There are, according to Janis and Mann (1977), five basic coping patterns for dealing with the stress engendered by conflicts in decision making of which vigilance is the only functional pattern.

Dysfunctional patterns that are commonly adopted are[xxiii]:

i)   Complacency: the threat or opportunity is ignored and the decision-maker acts with

a) Unconflicted adherence – carrying on as before, telling themselves that the risks are not serious if they don't change course

b) Unconflicted change to new course of action – taking the first course of action that presents itself, telling themselves the risks are not serious if they do change

ii)   Defensive avoidance: triggered by the belief a better solution cannot realistically be hoped for. This can be further split into:

a) Rationalization (this can't happen to us)

b) Procrastination (it doesn't matter if we put it off)

c) Buck passing (let someone else deal with it instead – and that this won't matter)

iii)   Panic/ Hypervigilance: triggered by the belief that there isn't sufficient time to search and deliberate, leading to frantic search, and seizing upon a hastily contrived solution.

Figure 5: Janis and Mann's Conflict Model (adapted from 1977, pp 70 and 86)

Which pattern decision-maker's adopt depends upon their beliefs about the seriousness of the risks, their hope of finding a better alternative and whether there is adequate time to search out important information and deliberate before making a decision. As the decision-makers' answers to these questions can vary over time it is to be expected that decision-makers will fluctuate from one pattern to another.

On Janis and Mann's account decision-makers are hypervigilant because they have mistaken beliefs about being able to find a good option within a limited time frame. To adopt a vigilant process decision-makers need to realistically assess the seriousness of the threat and challenge false beliefs about their lack of hope (ask: are alternatives available?), the assumed deadline (ask: can it be moved?) and what can be done within the time frame. Even if they have only limited time and doubt whether there is a good alternative they can choose more wisely if they avoid panic-stricken decision making. To do this decision-makers need to tell themselves that even some information might be better than none, and that a bad option is still better than a terrible one.

While situations influence the coping process adopted so do personality variables. Mann *et al.*, in a review of the model, note that personality variables of trait anxiety, habitual coping style, information-processing capability, tolerance for psychological stress, predisposition to optimism and pessimism, and sensitivity to time pressure, "will lead decision makers to depend more often on particular overlearned coping patterns when facing difficult decisions." (Mann, Burnett, Radford, Ford, 1997, p 2)

Distinguishing and questioning dysfunctional patterns
Unconflicted adherence and unconflicted change are instigated without careful appraisal of alternatives, and Janis seems to imply these are dysfunctional patterns as they are "complacent". For example he provides this vignette of unconflicted change:

> Once an executive realizes that there is something wrong about his current policy he focuses on a salient alternative that differs only slightly from the policy to which he is committed, which he believes will patch up the defect. Seeing nothing grossly wrong with it if the other powerful persons in the organization say it is satisfactory, he promptly adopts it. Thus, the pattern of unconflicted change is likely to be one that mediates "incrementalism." The original policy is changed slightly in response to a new threat and then, when the modified policy in turn runs into trouble, yet another modification that seems to be free of serious risks is uncritically adopted…thus he makes a series of incremental changes without ever canvassing or evaluating the full range of available alternatives (Janis and Mann, 1977, p 73).

It is not certain the decision making of this executive is unwise according to the analysis of wise decision making developed in chapter two. Incremenalism can sometimes be advisable as it can be safer to make small changes than leaps into the unknown, and it is likely that nearly all decisions require some modifications to steer through difficulties and adapt to changing on-going situations. Furthermore rethinking rather than adapting decisions requires considerable time and energy, and, especially within organisations, realignment of resources. Janis' model was developed in response to emergency situations where warnings were complacently ignored - in the case of warnings of significant and likely threat it is unwise to give them no consideration at all.

Complacency and defensive avoidance differ in that in complacency warnings are barely heeded, whereas in defensive avoidance the messages 'hit home' and their implications are defended against rather than acted upon. It is this difference that means that the complacent decision-maker is "persistently calm", while the avoidant decision maker is "predominantly pseudo-calm, with breakthrough of high emotional arousal when signs of threat become salient" (Janis and Mann, p 78).

3.5 Emotive Rules and Vigilant Decision Making

Emotive Rules that undermine Vigilant Decision Making

While the Conflict Model explains the reluctance to accept *entering into* a Vigilant Decision-Making process, Janis, drawing on case studies (many of US foreign policy decisions), also identifies how some emotions can undermine the process of decision making, enticing the decision-maker to *terminate* Vigilant Decision Making unwisely (1989, esp. chapter 2.4):

Table 10: Emotive Rules that undermine Vigilant Decision Making

Emotion *Emotive rule*	Source of the rule	Example
Frustration *"The hell with the consequences"*	Get rid of distress	Ford's decision to pardon Nixon. Emotions of anticipatory guilt over blood of Nixon on his hands, as Ford feared Nixon's suicide, and frustration with legacy of Watergate scandal (mountains of tapes and paperwork, subpoensas, unresolved issues etc). Ford wanted to sweep it all into the ashcan of history with one bold stroke
Anger *"Retaliate!"*	"When you are thwarted, injured, or humiliated, don't let the bastards get away with it; do something to punish them in retaliation" (p 72-3)	Breakdown of disarmament talks when Khrushchev withdraws after the shooting down of an espionage plane (Khrushchev complains his friend Eisenhower – repeated bitterly over and over - has betrayed him)
Pride *"Can do!"*	"Don't be chicken about resorting to a dangerous course of action when necessary, even if it scares the hell out of the experts; concentrate all your available decisionmaking resources to find ways of overcoming deterrents" (p 76).	Well known tendency in military establishments. The space shuttle accident result of the 'gung ho' 'can do' ethic at the space agency. The Iranian rescue mission under Carter.
Reactive Elation *"Wow! Grab it!"*	After a frustrating period of having trouble deciding, "If you hit upon a promising solution, much better than any you have been considering, grab it; don't take any chance of losing the terrific opportunity by wasting time looking further into it"(p 83).	Truman's use of A bombs on Japan

On Janis' account, using anger as an example, the decision-maker asks themselves what are the minimal requirements (e.g. averting the main dangers) for dealing with the decision-problem *and* how can they retaliate. If the action that enables retaliation doesn't meet the minimal requirements they seek further relaxation of these, and engage in defensive avoidance of the limitations to the retaliate option (1989, p 74-75). These Emotive Rules depend upon a meta-emotive rule, "rely-on-your-gut-feelings", which "says you should do whatever your gut feeling dictates at the moment" (p 71[xxiv]).

Emotive Rules that aid Vigilant Decision Making

Janis offers two Emotive Rules that he believes can aid Vigilant Decision Making:

Table 11: Emotive Rules that aid Vigilant Decision Making

Emotion	Emotive Rule
Vague feelings of repugnance and apprehensiveness:	"When you hit upon a suggested solution that meets the minimal requirements, ask yourself whether you have any negative feelings about committing yourself to carrying out the decision-including any vague feelings of repugnance or apprehensiveness, even if you cannot understand what might be wrong with the choice that is making you feel that way" (p 71)
Antipathy and liking:	"If after completing your information search and deliberations about pros and cons, you have two candidates that look about equally good, consult your gut reaction to see which one you prefer" (p 72)

Realism and vagueness in the Emotive Rules

The undermining Emotive Rules proposed seem to reflect at least some of common experience and the exclamation marks (Retaliate!, Can Do!) capture the imperative urging of these emotions – although it is not clear in Janis's account whether these emotions *cause*, through their urgings, immediate action or whether decision-makers *interpret* their urges as information suggesting that particular choices are important and urgent (cf. Schwarz, 2002). On a related point, nor is it clear exactly what decision-makers are meant to make of these emotions. When Emotive Rules are experienced is Janis recommending that these emotions and urges should be ignored? If so, is this always the case or can these rules sometimes be good guides or provide valuable information?

The aiding Emotive Rules also seem to capture common experience, but are again vague. The first is proposed as a trigger to further reflection (Janis refers to Freud and 'letting the unconscious have its say') and the second as an end to reflection. However it is not clear how these are experienced differently. In the first rule 'repugnance' is taken to suggest doubt, so continue searching, while in the second rule 'antipathy' is used to terminate search by choosing the liked option; how is the decision-maker meant to distinguish between repugnance and antipathy and why should one suggest further search and the other terminating search?

3.6 Special Procedures for Vigilant Decision Making

Janis' Special Procedures

Decision-makers can be coached or counselled to adopt a Vigilant Decision-Making strategy by the use of five 'Special Procedures' (Janis and Mann 1977, Janis 1982a). The Special Procedures and the stages of Vigilant Decision Making they are most relevant to are outlined below:

Table 12: Special Procedures To Aid Vigilant Decision Making

Special Procedure	Used for:	Stage of Vigilant Decision Making
Counteracting Rationalizations	Likely rationalizations undermining coping are identified and challenged	1 – appraise the challenge
Emotional Role Playing:	Possible harmful outcomes of neglecting the threat are made real through role playing living with the consequences	1 – appraise the challenge
Balance Sheet:	Pros and cons of alternatives are identified by asking about a) Utilitarian gains or losses to self and others b) Approval and disapproval from self and others	2 – surveying alternatives or 3 – weighing alternatives
Outcome Psychodrama:	Possible negative and positive outcomes of carrying out an alternative are identified and made real through role playing the consequences of alternatives	4 – deliberating about commitment
Stress Inoculation:	Likely setbacks are identified and coping responses prepared	5 – at commitment, before setbacks

A further Special Procedure: the 'PreMortem'

Klein (2003) has identified a further special procedure designed to challenge complacency - the PreMortem[xxv]. While a postmortem is carried out to determine why a patient died the PreMortem is designed to challenge overconfidence and become aware of potential difficulties before they arise to adapt choices and be prepared. The PreMortem begins by imagining a fiasco:

> When I conduct the PreMortem, I say I am looking into a crystal ball and, oh no, I am seeing that the project has failed. It isn't a simple failure either. It is a total, embarrassing, devastating failure. The people on the team are no longer talking to each other. Our company is not talking to the sponsors. Things have gone as wrong as they could (Klein, 2003, p89).

Then decision-makers, based on their experience and 'scars', identify their concerns about what could contribute to the fiasco and the choice is appropriately modified; the concerns identified are periodically revisited as the decision is carried out to remind decision-makers of potential problems[xxvi].

Emotions in the Special Procedures

Each of these Special Procedures relate to emotions. Counteracting Rationalizations, Emotional Role-Playing, Outcome Psychodrama and the PreMortem are tools to counteract complacency by enabling decision-maker's either face up to their already present fears rather than ignore them or explain them away, or to trigger fears and anxieties. The PreMortem provides, "a useful corrective to the overconfidence that usually marks new projects" (Klein, 2003, p89). Emotional Inoculation and the PreMortem prepare decision-makers to deal with the disappointment of setbacks so that these emotions don't overly discourage decision-makers. The PreMortem can be seen as a way to get around pride that leads to a lack of eagerness in testing one's own favoured ideas, and to uncover anxieties. The Balance Sheet helps decision-makers identify anticipated emotions of self and other regard to take into account when making decisions.

Wheeler and Janis deny that the use of the Balance Sheet is (or should be) unemotional:

> Twinges of emotion, in fact, often occur while people are writing down specific entries. Vague feelings of uneasiness as well as more specific apprehensions about certain risk can be recorded in the balance sheet if the person expects that he or she will suffer that kind of subjective discomfort from choosing a particular alternative. Similarly people can write down expected feelings of shame or guilt (Wheeler and Janis, 1980, p71).

Thus 'twinges' and 'uneasiness' point to anticipated emotions that can be added as negative outcomes (or presumably positives although the examples provided are all unpleasant emotions) and taken into account as part of the outcomes of the decision. Furthermore:

> A person may be surprised that he is still strongly attached to an alternative that has relatively few pluses and many minuses in the balance sheet. It may induce him to ask, "Why do I feel that way? What am I leaving out of the picture?" The surprising feeling may be a strong "irrational" feeling of aversion toward the alternative that looks like it might be the best one. Either reaction shows that something important must be missing from the balance sheet or that the intuitive feelings are being influenced by some irrelevant factor. These discrepancies between one's gut feelings and picture from the pros and cons can stimulate one to engage in intensive self scrutiny…This may lead to fresh discoveries of specific reasons for being attracted to one alternative or being repulsed by another. Here we are referring to wishes and fears that psychologists describe as "preconscious" sources of conflict-considerations that people remain unaware of unless they are stimulated to think about the discrepancy between their conscious appraisals and their gut feelings (ibid.).

There are a set of complex relationships between emotions in this example: finding oneself attached or aversive towards an alterative - gut feelings are in conflict with the Balance Sheet – causes surprise, and this surprise and attachment or aversion are interpreted as information that something important is being missed from the list of pros and cons. This interpretation then stimulates further self-scrutiny that uncovers 'preconscious' wishes and fears. A caveat is entered that the gut feeling (presumably of either being attached or aversion or surprise) are misleading if influenced by an "irrelevant factor".

Quite how decision-makers are meant identify preconscious wishes and fears[xxvii], how these connect with attachments and aversions, and what the decision-maker is meant to do with them is left unspecified. Janis also provides no guidance for how decision-makers are meant to

distinguish misleading from true gut feelings. Furthermore common experience suggests that there can be inappropriate attachments to options. Janis (1989) himself argues that attachment to "self-serving" (egocentric desires for prestige, self-aggrandizement and so on) and "affiliative" (e.g. avoid punishment by 'covering your ass') decision rules undermine Vigilant Decision Making[xxviii]. How are decision-makers meant to distinguish between good and bad attachments?

The wide applicability of the Special Procedures

While Janis' research demonstrated how these Special Procedures help with areas of personal decision making such as career and health, these procedures are also relevant to organisational decision making. For example, a manager who complacently denies the threat from a competitor can have his rationalizations identified and challenged, or can role-play what might happen to the organization (and more motivationally him or herself) through inaction. Mitroff, Mason and Pearson (1994) provide a list of common organisational rationalizations.

Nutt advocates emotional inoculation as "a realistic appraisal of possible consequences by decision-makers in organizations increases their tolerance for postdecisional setbacks". Decision-makers who are not surprised by the occurrence of setbacks, and are prepared with contingency plans, are better able to cope and less likely to engage in recriminations. Likely setbacks can be identified through role-play where parties lay out their fears to worst-case scenarios, and suggestions for how to cope with these identified fears are proposed (Nutt, 1989, p 274).

Empirical Evidence for the Special Procedures

Janis and his colleagues (Janis, 1982a, 1983) carried out control group research into the effectiveness of the Special Procedures providing support for – among other positive findings - adhering to exercise classes (Balance Sheet, Hoyt and Janis, 1982), and identifying additional values and objectives in marital and career decisions (Outcome Psychodrama, Janis and Flamme,1982; Balance Sheet, Mann 1972). No research seems to have been carried out into the Premortem.

While Janis believes that Vigilant Decision Making is presumed to be in the repertoire of most decision-makers, even if not always used, it seems unlikely these Special Procedures are. Even if they are, there is a question of the extent to which decision-makers can apply these Special Procedures to themselves, without the assistance of a decision coach or counsellor. This author can find no research investigating the question of how easily decision-makers can be trained and encouraged to use these procedures.

Additional psychological (emotional) states in the stages

Janis' account of the decision-making stages include the need for the decision-maker to adopt psychological (emotional) states - to *accept* the challenge, *commit* to the decision, and *adhere* despite negative feedback. The Special Procedures are designed to help decision-makers accept the challenge (e.g. challenging rationalizations) and adhere to their choice (emotional inoculation) and decision-makers can build commitment by taking small steps and telling others.

There is an additional psychological state that is needed before or perhaps as part of *committing* to the decision – gaining a *feeling of resolution* and *embracing trade-offs* involved in a choice. As decisions generally involve tradeoffs between different - 'incommensurable'- values, decision-makers will normally have to sacrifice some values in order to achieve others. Without embracing the need for tradeoffs decision-makers can fail to choose or 'flip flop' between options. Once decision-makers have embraced the choice and its tradeoffs they can engage in commitment building activities. It is possible the Balance Sheet helps decision-makers find resolution and embrace tradeoffs as it reduces post-decisional regret (Janis and Mann, 1977).

There is also a psychological state to contrast with *adhering to* despite negative feedback - *letting go* of choices that are not working out. As decisions are always within a pattern of on-going plans, making a choice can involve deciding to adhere to a previous choice or letting it to.

Decision-makers also talk about *feeling stuck* which seems to refer to a psychological/emotional state of indecision or indecisiveness in which the decision-maker does not know how to proceed, perhaps because of lack of clarity about any aspect of the decision or because they are experiencing conflicts they do not see a way to resolve. Feeling stuck involves mulling over and 'stewing in' emotions, especially of anxiety, without resolution or a sense of progress. This pattern is missed by Janis and Mann although it is perhaps as common a response to decision-making challenges as the other five coping patterns they identify. It would seem to have the same pattern of appraisals as defensive avoidance (risks if do change, risks if don't change, and (at least) doubts about hope for a better solution) but with paralysis rather than avoidance[xxix].

Testing 'embracement' and building commitment, and 'unsticking'

Whitmore (2002) provides a simple test that decision-makers can use to determine whether or not they will act on their choice, and to build commitment - to give a score out of ten for the degree of certainty that the agreed actions will be carried as "those who rate less than eight seldom follow through". In the case of less than eight Whitemore suggests that decision-makers could "reduce the size of the task or lengthen the time scale" (p 88). More generally decision-makers should re-examine their choice to identify why it is not embraced.

Decision-makers might be stuck at other points in a decision-making process than carrying out a choice; Omer and Dar (2007) suggest the following activities to help 'unstick' decision-makers[xxx]:

    i)   spending 15 minutes a day writing down thoughts about the dilemma to avoid excessive brooding

    ii)   assessing where information is avoided[xxxi]

    iii)   assessing ineffective solution attempts

    iv)   reviewing where decision making has been successful in the past and trying these steps

    v)   experimenting with an activity different from previous ineffective solutions

    vi)   experimenting to test an issue related to the dilemma or to attempt change in a paralysed area

4. Nutt: The Discovery Process

Introduction

Nutt distinguishes a 'Discovery Process' from 'Idea Imposition' and argues that decisions are more likely to succeed if the Discovery Process is followed rather than Idea Imposition. This analysis will draw mostly on <u>Why Decisions Fail</u> (Nutt, 2002), Delbecq, Liebert, Mostyn, Nutt and Gordon (2002) and Nutt (1999, 2008). Nutt supports his claim through an examination of an extensive database analysing decision processes and outcomes about a range of different types of decision in a variety of organisations (1999, 2005, 2007, 2008).

4.1 The Discovery Process versus Idea Imposition

The stages, goals and tasks of the Discovery Process

In the Discovery Process claims from varied stakeholders about what should be done are investigated, relevant information gathered, a considered direction set, ideas for meeting this direction explored and evaluated in terms of the direction set, and the chosen idea implemented with broad agreement from relevant stakeholders. Ethical issues are considered throughout the process.
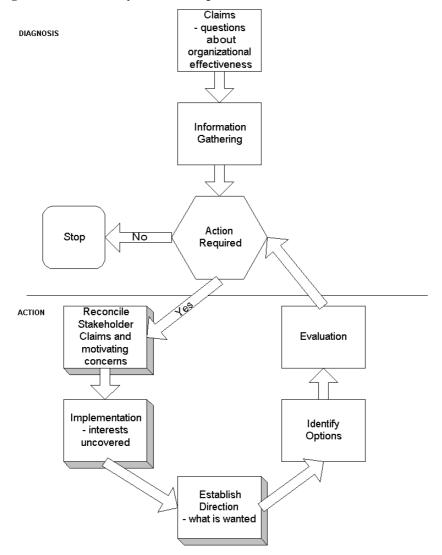
Figure 6: The Discovery Process (adapted from Nutt 2002)

DIAGNOSIS

```
                    ┌─────────────────┐
                    │     Claims      │
                    │  - questions    │
                    │     about       │
                    │  organizational │
                    │  effectiveness  │
                    └─────────────────┘
                             │
                             ▼
                    ┌─────────────────┐
                    │   Information   │
                    │    Gathering    │
                    └─────────────────┘
                             │
                             ▼
   ┌──────┐      No    ⬡ Action Required ⬡
   │ Stop │ ◄───────────
   └──────┘
```

ACTION

```
   ┌──────────────┐                    ┌──────────────┐
   │   Reconcile  │                    │  Evaluation  │
   │  Stakeholder │                    └──────────────┘
   │  Claims and  │                           ▲
   │  motivating  │                    ┌──────────────┐
   │   concerns   │                    │   Identify   │
   └──────────────┘                    │   Options    │
          │                            └──────────────┘
          ▼                                   ▲
   ┌──────────────┐      ┌──────────────┐
   │Implementation│      │   Establish  │
   │  - interests │ ───► │   Direction  │ ───►
   │   uncovered  │      │ - what is    │
   └──────────────┘      │   wanted     │
                         └──────────────┘
```

Yes

The Discovery Process is broken down into five stages, with 'tactics' (or tasks in the terminology adopted here) for "uncovering the things that are called for in a given stage" (2002, p 45). These stages are:

i) *Understand Claims*: Collecting information to understand claims calling for action

ii) *Set a Direction*: Establishing a direction that indicates the desired result

iii) *Uncover Ideas*: Mounting a systematic search for ideas about what to do

iv) *Evaluate Ideas*: Evaluating these ideas with the direction in mind

v) *Implement the Preferred Idea*: Managing social and political barriers that can block the preferred course of action during implementation

Table 13: Stages, Goals and Tasks in the Discovery Process

Stages and Goals	Tasks
Stage 1. Understand Claims Goals: Determine which claims to pursue. For serious issues investigate what is at stake.	- Identify claims made about problems and opportunities - Question claims (don't take at face-value) - Unpack the claim's assessments of 'arena of action' and significance (motivating concerns) - Consider social and political forces (e.g. 'who can block action')
Stage 2. Set a Direction Goal: Establishing a direction that indicates the desired result	- Identify the needs (objectives) embedded in the claim, and distinguish whether something needs fixing, or an objective reaching - Build a list of broader and narrower objectives for flexibility in the scope - Uncover objectives implicit in proposed solutions (the whys in the hows) and claims - Use the laddering technique
Stage 3. Uncover Ideas Goal: Finding a range of possible ideas	- Consider integrated benchmarking, repeated solicitation and innovation as best practice - Use creative thinking practices - Use of safe spaces
Stage 4. Evaluate Ideas Goal: selecting best idea	- Use Dialectical Inquiry, Devil's Advocacy - Avoid intuition and defensive reasoning
Stage 5. Implement the Preferred Idea Goal: making the selected idea work	- Manage social and political barriers that can block the preferred course of action during implementation

<u>*Idea Imposition*</u>

a) From a failure of open-mindedness and patience

The Discovery Process is an open-minded evaluation of the decision that can be high-jacked by the imposition of a ready-made plan, which is evaluated only defensively. In this 'Idea Imposition' process the focus rapidly turns to a visible and widely or powerfully-supported claim with other claims ignored, resulting in jumping to conclusions about what to do and then

trying - often unsuccessfully due to the opposition aroused by the attempt to impose the idea - to implement the solution first stumbled upon. Idea Imposition often begins when a claim is uncritically accepted, although the Discovery Process can be derailed later if an emergent opportunity arises that is uncritically accepted.

b) Idea Imposition and the failure of organisations to learn

The failures from each stage resulting from Idea Imposition tend to be repeated as organisations fail to learn what distinguished effective from ineffective decision-making practices. This is because of an unwillingness to recognise the role of chance events which allows people to take credit for lucky outcomes or be blamed for unlucky ones (depending on the culture of the organisation), as well as organisational practices that lead to the covering up and distortion of unwelcome feedback on the outcomes of decisions. This information becomes more deeply inaccessible when the covering up of information itself becomes 'undiscussable' (Argyris and Schon, 1974/ 1992).

4.2 The Stages of the Discovery Process

Stage 1. Understand Claims

a) A claim is made…

Drawing on Toulmin's analysis of the structure of arguments (Toulmin, 1958), Nutt suggests that the process of decision making begins when a 'claim' is made about a challenge or opportunity that the organization is facing[xxxii]. These claims propose the 'arena for action' the decision needs to address[xxxiii] and often come wrapped with assessments of their significance and the particular course of action the claimant believes is required to deal with the problem or opportunity identified. For example the claim made that 'sales are dropping' sets a particular arena for action and is often accompanied by further claims about how much this matters, why this has happened and what should be done to solve the problem. If the Idea Imposition process is followed this claim and its significance is taken at face value and the course of action suggested is acted upon. This can result in hidden concerns not being identified and conflicting claims from various stakeholders not being reconciled.

b) …Some claims are open-mindedly investigated

If, preferably, decision-makers follow the Discovery Process information finding is set in motion, and other viewpoints and claims are sought and investigated. In organisations decision-makers are bombarded with claims (Cyert and March, 1963) and sometimes, after beginning a Discovery Process of information gathering, it is decided that no action is required and the decision-making process justifiably stops. Otherwise the process moves to stage 2, setting a direction.

In stage 1 decision-makers need to make a series of sub-decisions:

i)   Which claims to investigate from the bombardment of claims;

ii)   Whether to accept the claim and possible implementation plan at face value or instigate a Discovery Process;

iii)   How to investigate the claim further.

Stage 2. Set a Direction

a) Search for objectives

A direction can be set either, in the opportunistic Idea Imposition mode through latching onto a ready-made idea, or, preferably, using the Discovery Process by identifying the needs embedded in various claims and setting a 'problem-solving direction' (what needs fixing – e.g. why utilization is declining) or an 'objective reaching direction' (what are the desired results – e.g. increased revenues).

Nutt comments that people think primarily in terms of solutions so identifying objectives (or values in the terminology from chapter two) can be difficult. Two ways to overcome this tendency and uncover objectives are:

i)   Identifying possible solutions and then asking what results are expected from the solutions (and recording these separately to emphasise the different categories)

ii)   Examining the claims made about what the decision-problem is, as these claims include often implicit assumptions about the objectives that should be met.

b) Using the Laddering Technique

As objectives determine the solutions that will be searched for, setting the objectives too narrowly limits the search for solutions[xxxiv]. A tentative list of objectives can be improved by the 'laddering technique'. In this technique higher-order objectives are reached by repeatedly asking why an objective is deemed important. For example in a case of decision making at Ford, facilitated by Nutt, a suggested solution to dealing with problems was a trade-off between adding people and cutting salaries. Asking what objective this would accomplish produced the answer that it might reduce staff stress. This tentative objective was investigated by asking "Why is this important?" leading to the assessment that it would motivate middle managers, and this was important as that it will improve the work climate. Continuing to ask "why?" produced this 'objective hierarchy':

Moving up the ladder provides an answer to why a particular objective matters; moving down it suggests how the objective can be satisfied. Why reduce job stress? - to motivate middle manages. How motivate middle managers? - by reducing job stress. As objectives higher up the ladder provide a wider range of possible solutions Nutt suggests that if only one objective is considered "the broadest feasible objective is always the best" but it is even better to consider the broader and narrower objectives to "initiate a search for a string of actions" (2002, p 129)
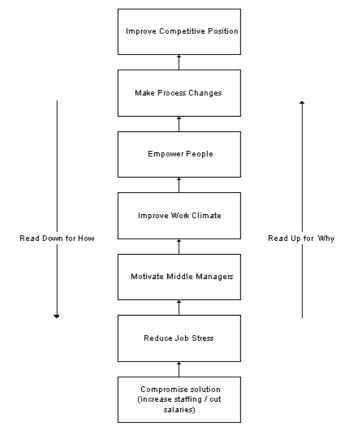
Figure 7: Using the Laddering Technique at Ford (Nutt, 2002, p 128)

```
                      ┌──────────────────────────┐
                      │ Improve Competitive Position │
                      └──────────────────────────┘
                                  ▲
                      ┌──────────────────────────┐
                      │    Make Process Changes     │
                      └──────────────────────────┘
                                  ▲
                      ┌──────────────────────────┐
                      │       Empower People        │
                      └──────────────────────────┘
                                  ▲
                      ┌──────────────────────────┐
                      │    Improve Work Climate      │
                      └──────────────────────────┘
                                  ▲
                      ┌──────────────────────────┐
                      │  Motivate Middle Managers    │
                      └──────────────────────────┘
                                  ▲
                      ┌──────────────────────────┐
                      │      Reduce Job Stress       │
                      └──────────────────────────┘
                                  ▲
                      ┌──────────────────────────┐
                      │   Compromise solution        │
                      │  (increase staffing / cut    │
                      │         salaries)            │
                      └──────────────────────────┘
```

Read Down for How   Read Up for Why

c) Assessing the Laddering Technique

The helpfulness of why and how questions to probe deeper into values and suggest options is also recognised by other decision theorists (e.g. Janis and Mann 1977, Keeney 1992) as well as in the creativity literature (e.g. De Bono 1993). In many techniques there is a trade-off between completeness and ease of use. Nutt notes that getting action-orientated decision-makers to investigate objectives is not easy and the ladder has the advantage of an easy way into objectives through proposed actions. However it also has limitations:

1. It constricts the creative search for objectives/values and alternatives. As the ladder has only one rung for each step it implicitly limits the search for why and how answers to one at each level. The laddering technique can be contrasted with De Bono's 'Concept Fan' (1992, pp 129-136) and the objectives hierarchy and the means-end network (Keeney, 1992 - see the chapter

on Hammond, Raiffa and Keeney) which provide a method to generate and record a wide range of different alternatives.
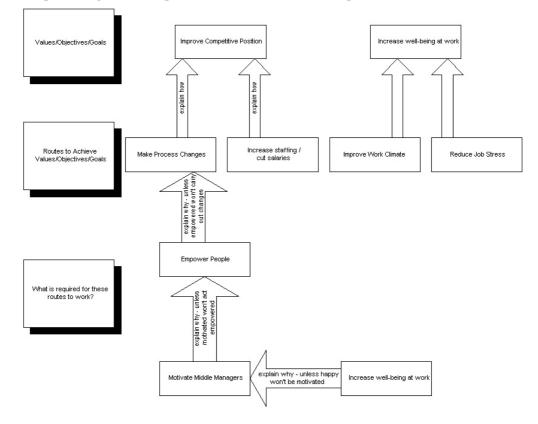
2. Lack of clarity over the steps in the ladder. Furthermore there seems to be lack of clarity about whether the steps on the ladder are values/objectives or alternatives and how these relate to each other. The official story is that each move up is an answer to a why question and each move down an answer to a how question. But in the ladder presented here this does not always seem to apply. For example are people empowered by improving the work climate (the how as claimed in the ladder) or is the work climate improved by empowering people (as seems possible)? As the concept fan of de Bono suggests there might be multiple paths on the same level, and furthermore there can be complex feedback loops – for example an answer of how to motivate middle managers might by improving the work climate, which might be accomplished by reducing stress and empowering people (among other means), and motivated managers might improve the work climate. More complex diagrams than a ladder are required to capture these relationships.

3. Possible lack of critical assessment of situation, objectives and alternatives. There is no specified role for critical thinking in the ladder. Is the ladder built upon a correct understanding of the situation the decision-makers are facing? Should the values and objectives identified be pursued, and how able are the 'hows' to meet the 'whys'? This is not an objection to the ladder in itself, rather recognition of what it can and cannot accomplish.

4. Possible submerging of the visibility of values. Some values can be both ends-in-themselves and means to other values. The danger with the ladder is that ends-in-themselves can be lost as decision-makers move up the ladder. For example reducing job stress can be an end in itself (as part of leading 'The Pleasant Life' (Seligman, 2002)) and also the means to improving competitive position. If the only objective that is considered is improving competitive position then focus on the further value of employees leading a pleasant life is lost.

d) Capturing more relationships

An example of a more complex model of relationships can be developed. This diagram (below) breaks the analysis into three different categories – what the decision aims to accomplish (values/objectives/goals), possible routes to achieve these outcomes, and what is required for these routes to work – and enables complex relationships to be drawn between these categories and the reasoning that supports these relationships. The diagram can be expanded to include further items under each category and the reasoning that supports the relationship could be investigated and challenges to it recorded.

Figure 8: Representing relationships between values, routes and requirements

Stage 3. Uncover Ideas

a) Factors that aid and impede uncovering ideas

This process is more likely to be successful if certain organisational features are in place. The culture of the organisation needs to encourage innovative thinking rather than being critical

and defensive, something that can be improved by the creation of 'safe spaces' (an environment that minimizes control and gives people latitude to speculate) as well as the adoption of creative thinking practices such as silent reflective group process, and the hiring of creative people.

The search for ideas is likely to be impeded by factors such as low tolerance for ambiguity, fear that decisions in the making pose threats, a perceived shortness of time leading to a rush to judgment, groupthink (Janis, 1971), the use of teams that gravitate towards compromise, and the misuse of resources where research is used to defend pet ideas rather than investigate multiple ideas in an open-minded manner.

b) The impact of perspectives
The search for ideas is also flawed by adopting limited 'perspectives' (Linstone, 1984). If a 'technical' perspective is adopted the emphasis is placed upon facts, economic realities and the easily measurable. If a 'personal' perspective is dominant concerns about how individuals see themselves as benefactors or victims come to the fore in issues such as job security, opportunities to demonstrate competence and the means for advancement. If the 'organisational' perspective is taken ideas focus around organisational rules and infighting among power centres.

On Nutt's analysis the failure to consider a variety of different perspectives is also a failure at the previous stage - to set the direction adequately; when ideas are imposed other perspectives are not investigated.

Expanding on Nutt varied perspectives can also be used to illuminate different aspects of the decision-making process. For instance they can help to:
a) Understand the decision-problem - what is going on from these different perspectives?
b) Suggest different options – are there technical, personal or organisational solutions?

An example of understanding the decision-problem from different perspectives enabling the identification of different options is provided by Mitroff (1998, pp 23-25). A manager of a tall

building is receiving a mounting number of complaints from the building's tenants and clients about the long waiting times for the elevator service. From the technical perspective the decision-problem is understood in terms of slow lift service and possible options are putting in new elevators and speeding up the current elevators. From the personal perspective the decision-problem is understood as boredom while waiting and a solution is installing large mirrors in the lobby so the tenants and visitors can occupy themselves as they wait.

Stage 4. Evaluate Ideas

a) Factors that aid and impede evaluating ideas

Techniques that can be used to evaluate ideas include Dialectical Inquiry where different groups develop and then compare contrasting ideas and Devil's Advocacy where ideas developed by one group are subjected to critical evaluation by another.

Poor practice in evaluating ideas takes the following forms:

i) *Appeal to Intuition*. This is a flawed strategy as, for example, it ignores relevant information such as base rates (e.g. Nisbett and Ross, 1989). Furthermore appealing to intuition fails to provide a convincing explanation to others who do not share the intuition, often suspect self-interested motives and subsequently resist the imposition of an idea they cannot see the rationale for.

ii) *Defensive Analysis*. Alternatively, analysis can be carried out defensively to support the idea-imposition process. A great deal of time and money is spent on a defensive evaluation of a favoured course of action, an investment that is perceived as self-interested and fails to convince sceptics leading to further escalation of defensive evaluation under the false belief that if only sceptics could be shown the right numbers they would be convinced. The sceptics though are right, as these defensive evaluations tend to focus exclusively on potential benefits, subjectively interpreted as more favourable than the data suggests, with little consideration being given to possible risks. Little or no funds are invested in the search for alternative ideas.

iii) *Ethical Failings*. It is possible to fail ethically in two kinds of ways:

a) Ethically dubious positions are advocated (right versus wrong) that satisfy individuals' lust for power and greed, self-righteousness or self-protection, often masked by deception about the value of the ideas promoted. The failure to consider moral issues can result not only from base motivations but also from a lack of "moral imagination" (Werhane, 1999); by failing to see the broader context within which a decision is located decision-makers miss "the moral point of view" (Nutt, 2002, p 225). These failing can and should be countered by adopting a stakeholder approach and recognizing the interests of a wider array of constituencies.

b) Conflicting ethical positions are advocated (right versus right[xxxv]) as beliefs about what is fair and just can vary between people. However these values are often not articulated so that decision-makers fail to understand both their own and others value positions. Discussions instead are characterised by unintelligible emotional outbursts, conflict and the conviction that the other party is unethical, leading to the development of a poisonous resentment, the failure to agree a course of action, the undermining of decisions through a lack of trust, and, in the extreme, whistle-blowing and boycotts.

b) Dealing with ethical differences

Potential ethical differences can be better dealt with by "prodding" people to reveal their ethical concerns throughout the decision-making process (2002, p 223). They can be encouraged to point out anything that has a questionable value by using the 'Billboard Test' (the hypothetical emotional reactions to material being made public). Ethical reviews can be carried out by getting stakeholders to assess claims and options, and identifying the concerns they have with these claims and options. These concerns are signposts to underlying values, which can then become the source of a dialogue among the community of stakeholders. Such a process sensitises people to ethical concerns and suspends the self-orientation that can dominate decisions with a "mutuality relationship" (2002, p 224). Once core values have been identified then claims and options can be modified so that they are in line with these values.

O'Connor and Godar (1999) argue that although the Billboard Test, and related kinds of ethics tests, dominate the advice given in organisational behaviour textbooks, they are flawed as they

wrongly assume:

i)   Cultural relativism: the test assumes that the response of members of the culture cannot be wrong (e.g. the readers of the billboard are a good moral guide)

ii)   Emotional responses cannot be inappropriate: the test assumes that people will feel shame or embarrassment at the thought of public exposure but "Experience certainly tells each of us that there are a number of people who are not bothered or embarrassed, who experience no "qualms," when actions of theirs which in fact violate moral standards are actually disclosed" (p 77).

Nutt though does not use the Billboard as a final test of ethics, rather using the Billboard to generate *candidate* values that can be further assessed, by for example, engaging stakeholders in dialogue, so that core enlightened values can emerge.

A further difficulty is disagreements over core values. Beyond "balanc[ing] conflicting interests and uncover[ing] the fallout" (p 225) Nutt doesn't offer suggestions for how to advance when parties hold conflicting core values; there is though a literature to draw upon that approaches this difficult task of conflict resolution (e.g. Fisher, Ury and Patton, 2003; Benjamin, 1990).

Stage 5. Implement the Preferred Idea

a) Factors that aid and impede implementing the preferred idea
Ideas are implemented by getting the acceptance of stakeholders who can help or block the course of action decided upon. The acceptance of stakeholders can be promoted by:

i)   Involving them or their representatives in decision making and canvassing them early in the process so that they 'own' the decision.

ii)   Networking to guide stakeholders so that they alter their objectives, social ties and self esteem so that their beliefs and values are in line with the decision.

iii)   Persuading the stakeholders by 'selling' them the decision through dramatizing the alleged benefits.

iv)   Using an 'edict' to prescribe the behaviour necessary to realise the decision.

Nutt argues these tactics are ordered in decreasing effectiveness. When there is no buy-in, because decision-makers have failed to involve stakeholders in the process, managers often try to realise their choice by using an edict – telling people what to do. This is rarely successful because those who have not been consulted about the decision and believe themselves to be losers fight back through passive tactics of tokenism, tacit resistance, or obstruction. And even those with no stake in the outcome resist, as they don't want to set the precedent of yielding to force. Trying to persuade people by selling them the idea only works if people do not have something to lose.

4.3 Empirical evidence for the Discovery Process

The development of the database

Nutt has developed an extensive database of over 300 decisions, collecting information about the process used to make the decision and their outcomes enabling many aspects of the decision processes to be investigated for their impact on decision outcomes (Nutt, 1999, 2005, 2007, 2008).

In developing this database a contact person was used to identify a recent decision that had considerable resource demands and important consequences in their organisation and to specify three people who could provide information abut how the decision was made and its outcomes. One of these, the primary informant, had responsibility for the decision and one of the secondary informants also provided detailed information for how the decision was made. To avoid self-serving bias in judging the outcomes of the decision only the second and third informants were used to provide data on its success.

Data was collected through interviews and cross-referenced with documentary sources about how the decision was made, and summarised as a diagram of decision-making steps agreed by

two classifiers; information about decision outcomes was not included in these diagrams to enable blind to outcome judgements to be made about the process.

Table 14: Sources of information in the Nutt studies

	The decision process (Interview)	The decision outcomes (Questionnaire)
Primary informant (decision maker)	Yes	-
Secondary informant	Yes	Yes
Secondary informant	-	Yes

Data was collected through questionnaires on the decision outcomes. The following measures were used:

- The number of alternatives considered[xxxvi]

- The value of the decision (as subjectively judged)[xxxvii]

- The development time (to measure process efficiency)

- Whether the decision was adopted[xxxviii]

Comparing the Discovery Process and Idea Imposition

As can be seen from the table below comparing outcomes for the Discovery Process and Idea Imposition the Discovery Process was both more efficient and more effective, producing decisions quicker, with higher value and higher adoption rates. Nutt summarises his data:

> Overall, idea-imposition has a 55 per cent sustained adoption rate, which falls to 41 per cent when partial use is accounted for and the process is inefficient, averaging 20.5 months to complete, producing 'adequate to good' decision results…Discovery was applied for 54 (26 per cent) of the decisions. Discovery produced far better outcomes, with 90 per cent sustained adoptions, 85 per cent complete adoptions, rated as good to excellent, completed in nearly half the time (11.9 months) (Nutt, 2008, p 442-443).

Nutt also compared across contexts and concluded, contrary to the claims of contingency theory, that the Discovery Process was more successful "no matter what the urgency, importance, resource level, initial support, decision maker level, sector, or type of decision" (*ibid*, p 425).

Figure 9: Comparing Discovery and Idea Imposition Outcomes (Nutt, 2008, p 440)

Process types	Use		Effectiveness						Efficiency	
	Frequency		Sustained adoption		Complete adoption		Decision value		Total time	
	N	Freq.	Rate	DMRT[1]	Rate	DMRT	Rating[2]	DMRT	Months[3]	DMRT
Discovery	39	19%	**90%**	A	**85%**	A	**4.3**	A	**11.9**	B
Idea imposition	29	14%	55%	C	41%	D	3.5	B	20.5	C
ANOVA/p value (two contrasts)			0.0005		0.0001		0.05		0.01	
MANOVA/p value[4]			0.01							
Abandon discovery for an emergent opportunity										
Emergent opportunity	15	7%	73%	B	66%	B	3.6	B	21.7	C
Find replacement for failed idea										
Redevelopment	28	14%	64%	B	57%	C	3.6	B	16.9	B
ANOVA/p value (four contrasts)			0.01		0.005		0.05		0.03	
MANOVA/p value[4]			0.03							
Total	111	55%								
Totals for the database	202	100%	63%		50%		3.6		17.1	

Notes:
[1] Duncan Multiple Range Test: the letter codes indicate significant differences in the mean values with the equivalent of a paired t-test, $p < 0.05$, with letter A denoting the best outcome, B the second best, etc. Best performing process outcomes are shown in bold.
[2] Scale: 5 = outstanding; 4 = good; 3 = adequate; 2 = disappointing; 1 = poor.
[3] Time is measured in months from beginning of development to the ultimate use or abandonment of the decision.
[4] The value, adoption, and efficiency measures are weighted equally in the MANOVA, reversing the scale for efficiency.

Comparing problem solving with goal directed approach

Nutt provides data comparing adopting a goal-directed or problem-solving stance. The difference is that a problem-solving stance starts with identifying a problem to fix, while a goal-directed approach defines a need (regardless of the cause) that provides direction to the Discovery Process.

The table below, comparing search approaches, shows that goal directed produced higher rated decision values (3.9 to 3.3), were quicker to develop (8.4 months compared to 13.1) and were more likely to be initially adopted (69% compared to 51%) and be completly adopted after two years (57% compared to 41%).

Nutt notes if the process adopted was problem-solving, success was rare however a solution was searched for. He explains this as due to both a narrowing of the scope of the investigation, with a focus limited to how *this* problem be fixed...

> Search was limited because the problem concentrated solution-seeking efforts
> on overcoming the problem that was identified and excluded all other ideas.
> Overcoming morale problems limits solutions to morale-related ones.
> Translating this to a goal of improving performance opens up search to

anything that can improve performance including morale-related solutions (Nutt, 2005, p 870).

…and to political forces where a problem focus is taken to imply blame and energies are spent on self protection rather than problem fixing:

> Self-protection was invoked because decision makers affixed blame, sometimes intentionally and sometimes unwittingly, by connecting the problem to someone who could be held responsible for it. People in the organization that were singled out attempted to protect themselves to avoid the consequences of blame. Defensive measures were taken to absolve the blame or to deflect it to someone else (ibid).

This suggests, contra Kepner and Tregoe, that whether a Problem Solving or a Decision-making stance is adopted is a choice of how the decision-problem is framed, and that it is generally more successful to approach decision-problems as decisions needing to be made than problems to be fixed.

Figure 10: Comparing Search Approaches (Nutt, 2005, p 861)

Success of the search approaches

Approach	N	Frequency	Number of alternatives		Decision value		Development time		Initial adoption		Complete adoption	
			No.	DMRT	Rating[a]	DMRT	Mo.[b]	DMRT	Rate	DMRT[c]	Rate	DMRT
Opportunity	66	19%	1.3	B	3.5	A/B	9.1	B	56%	B	37%	D
Chance/emergent opportunity	29	8%	1.1	B	3.2	B	6.0	A	56%	B	40%	D
Undirected search	50	15%	1.0	B	3.2	B	9.5	B	57%	B	48%	C
Goal-directed	93	27%	2.5	A	3.9	A	8.4	B	69%	A/B	57%	B
Problem-directed	56	17%	2.3	A	3.3	B	13.1	C	51%	B/C	41%	D
Bargaining (overall)	49	14%	2.1	A	4.0	A	7.5	A/B	79%	A	75%	A
Totals	343	100%										
Significance (ANOVA)			$p < 0.05$		$p < 0.09$		$p < 0.05$		$p < 0.02$		$p < 0.01$	
Significance (MANOVA)		$p < 0.03$										
Types with bargaining												
US with bargaining	10	3%	2.1	B	3.8	B	7.4	B	70%	B	60%	B
Goal-directed with bargaining	20	6%	2.0	B	4.2	A	6.0	A	95%	A	85%	A
Problem-directed with bargaining	14	4%	2.5	A	3.8	B	8.9	C	64%	B/C	64%	B
Totals	44	13%										
Significance (ANOVA)			$p < 0.05$		ns		$p < 0.05$		$p < 0.03$		$p < 0.03$	
Significance (MANOVA)		$p < 0.05$										

[a] Scale: 5 = outstanding, 4 = good, 3 = adequate, 2 = disappointing, and 1 = poor.
[b] Time is measured in months from recognition of the need to act to the end of development.
[c] Duncan multiple range test (DMRT): Letter codes significant differences in the means with an A indicating the best outcome, B second best, etc., $p < 0.05$.

The table also shows that approaches that included bargaining were the most successful, especially if this included a goal-directed approach. This combination had the highest rated decision value (4.2), the lowest development time (6 months) and the highest initial adoption (95%) and complete adoption (85%). This provides support for Nutt's claim on the need to manage political pressures within organisations while pursuing a Discovery Process.

4.4 Further issues: wide applicability and the role of emotions

The wide applicability of the process

While Nutt focuses of organisational decisions much of what he writes is equally applicable outside organisations where people can follow an open-minded Discovery Process or uncritically rely on Idea Imposition. The major area of difference is the role of stakeholders in the decision. However decisions are rarely made in a social vacuum, as others often have important interests at stake in decision outcomes, can provide (or not) useful input into decision processes, and can enable (or disrupt) execution of the choice.

The role of emotion in the process

Although neither theoretical analysis of emotions nor empirical evidence of their impact is offered Nutt suggests that emotions often derail the Discovery Process.

One trigger to adopting an Idea Imposition strategy is a sense that events might spin out of control and a related fear of harm to one's perceived standing through failure to act decisively:

> DMs who prefer idea-imposition seem wedded to action. The preference for a 'quick fix' is motivated by pragmatics and by fear. Being decisive by seizing an opportunity is seen as the hallmark of a successful executive (Brunsson, 1982), creating a preference for speed (Starbuck, 1983). When such an opportunity surfaces it prompts some decision makers to act by documenting the idea's benefits. This deflects situations that could spin out of control and harm a career. The quick fix has several important shortcomings. It creates a trap that limits search and discourages knowledgeable people from offering ideas. The 'opportunity' can appear to be a pet idea, raising questions about the DM's motives. The hoped-for rapid response is delayed as the DM lines up support and offers a defence (Nutt, 2008, p 447)

Connected to this is the uncertainty and doubt that arises from ambiguity and the relief that is experienced when an idea – a way out – is rashly adopted:

> Having an answer sweeps aside ambiguity, giving temporary relief, but this derails search. Beginning with a remedy is rash when decision makers lack an understanding of their needs. Instead of contemplating needs, decision makers are drawn to documenting the virtues of an idea and stakeholders' reactions to it. The more blatant this becomes, the more defensive the evaluation; seeking to turn aside a critic's objections (ibid, p 448).

Fear is especially potent in the case of problem-focused search when avoiding blame becomes particularly important. Decision-makers can also be drawn towards options that satisfy their emotional needs for greed, ego-gratification and power.

Two potentially positive roles for emotions are suggested. Doubt should not motivate premature commitment; rather ambiguity needs to be accepted[xxxix] and "doubt can be a powerful force pushing you to think more deeply about what is needed" so that true insight emerges (Delbecq, Liebert, Mostyn, Nutt and Gordon 2002, p 32). Emotional outbursts triggered by certain ideas and ethical disagreements, although often perceived as unintelligible and leading to a breakdown in understanding (see above), point to important underlying issues and values as the outburst verbalizes "an objection but not the values that prompted the objection" (Nutt, 2002, p 220).

5. Hammond, Raiffa and Keeney: PrOACT

Introduction

Hammond, Raiffa and Keeney present the PrOACT model in <u>Smart Choices</u> (1999). It is they claim, "based on what researchers—including the three of us—have learned over the past fifty years…We distilled the essence of this research, combined it with experience and common sense, and made it accessible" (Harvard Business School, no date). This analysis will draw mostly on this text, Keeney's <u>Value-Focused Thinking</u> (1992) and Hammond, Raiffa and Keeney (2001a, 2001b) and Keeney (1994). Kajanus, Ahola, Kurttila and Pesonen (2001) provide an illustrative account of many aspects of the model in use.

5.1 The PrOACT Model

The stages, goals and tasks in PrOACT

PrOACT analyses decisions into eight elements, the first five of which are (more or less) core stages. Hammond *et al*. (2001a, 2001b) also provide an analysis of 'Psychological Traps' that can catch the unwary decision maker.

The first five stages are:

   i)   **Pr**oblem: What is the decision about?
   ii) **O**bjectives: Which values are at stake?
   iii) **A**lternatives: What options are possible?
   iv) **C**onsequences: What are the possible consequences of these options?
   v)   **T**radeoffs: Which is the best available option?

The initial letters from these stages form the acronym PrOACT; this is an acronym designed to capture the main stages and emphasise that decision making should be proactive. An admirably detailed and clear set of tasks to help decision-makers realise the goals of the stages are provided - most are listed in the table below. The texts provide further specification for how to realise these tasks.

Table 15: Stages, goals and tasks in the PrOACT Model

Stages and Goals	Tasks
Stage 1. Problem Goal: Work on the right decision-problem	Be creative about the problem definition as how the problem is defined is crucial to what is chosen Maintain your perspective by remembering crafting a good problem definition takes time and careful thought and balancing against: - Time (do you have enough?) - Importance of the decision-problem - Emotional energy (can you face it now?) Define the decision-problem by: - Investigate how the 'trigger' has framed the decision - Question assumed constraints and assumptions - Identify the essential elements - Understand what other decisions hinge or impinge on the decision. - Establish a sufficient but workable scope for the problem definition - Gain fresh insight by asking others how they see the situation Re-examine the problem definition while working on the decision as perceptions and situations change
Stage 2. Objectives Goal: Specify your objectives	*Identify objectives by:* A Wish List; Determining the Bottom Line; Examining Tradeoffs; Examining Alternatives; Consulting Codes, Guidelines and Regulations; Taking Different Perspectives; Consulting Strategic Objectives… *Structure objectives by:* - Succinctly putting into Verb-Object form - Creating a Hierarchy of Objectives - Creating a Means-End Network
Stage 3. Alternatives Goal: Create imaginative alternatives	*Creatively think up options by:* - Asking how objectives can be realised. - Challenging assumed constraints. - Setting high aspirations to force thinking in new ways. - Thinking before consulting others (in order not to be framed by others perceptions). - Learning from what others have done. - Asking others for suggestions. - Giving the subconscious time to operate. - Creating alternatives first, evaluating later. *Consider alternatives focused on:* - Process (turning the decision over to voting etc) - Win-win (with others involved in the decision) - Information-gathering (alternatives that enable) - Time-buying (alternatives that enable) *Never stopping looking for alternatives*

Stage 4. Consequences Goal: Understand the consequences	Describe consequences with appropriate accuracy, completeness and precision. Mentally put yourself into the future (what will it be like). Create a 'free-form' description of the consequences of each alternative. Eliminate any clearly inferior alternatives. Build a consequences (values and alternatives) table to compare alternatives.
Stage 5. Tradeoffs Goal: grapple with your tradeoffs	Eliminate 'dominated' and 'practically dominated' alternatives. Make tradeoffs between objectives with 'even swops' (to identify the alternative that best meets the objectives).
Stage 6. Uncertainty Goal: Clarify your uncertainties	Build a risk profile by: - Identifying key uncertainties - Specifying the different outcomes from these uncertainties - Assigning probabilities to the outcomes - Clarifying the consequences of the different outcomes Picture risk profiles with decision trees
Stage 7. Risk tolerance Goal: Clarify your risk tolerance	Understand your willingness to take risks by: - Determining the relative desirability of the consequences of the alternatives by clarifying their impact - Weighing desirabilities by probabilities of outcomes - Comparing alternatives and choosing If choosing is still difficult quantify risk tolerance with desirability scoring and create desirability curves
Stage 8. Linked decisions Goal: Consider linked decisions	Examine how the alternatives impact on future choices Consider choices and plan in this light (including choices that increase your capacity to choose wisely in the future)

Iteration and flexibility within the process

Although presented as a series of stages decision-makers are reminded that the decision process can terminate at any point if a choice becomes clear and that the outcomes from deliberation at different stages are not fixed –for example decision-makers can and should re-examine the framing of the decision-problem as they work on it as perceptions and situations change, and they should never stop looking for alternatives.

The ordering of the stages: Alternative-Focused and Value-Focused Thinking

The ordering of stages is based upon Keeney (1992, 1994). Keeney distinguished between 'Alterative-focused thinking' (AFT) and 'Value-focused thinking' (VFT). Keeney explains:

> Value-focused thinking essentially consists of two activities: first deciding
> what you want and then figuring out how to get it. In the more usual
> approach…alternative-focused thinking, you first figure out what alternatives
> are available, and then choose the best of the lot (1992, p 4).

In AFT the need to make a decision is triggered by the presentation of alternatives, only these alternatives tend to be considered and evaluated only (if at all) in terms of the values implicit in these given alternatives. By contrast VFT begins with values[xl]; the decision-maker specifies the values important to them and then uses these values to create alternatives that can best capture their objectives, thus broadening the scope of the decision.

Table 16: The stages of AFT and VFT (based on 1992, p 49)

Stage	Alternative-focused thinking	Value-focused thinking
1	Recognise decision-problem	Recognise decision-problem
2	Identify alternatives	Specify values
3	Specify values	Create alternatives
4	Evaluate alternatives	Evaluate alternatives
5	Select alternative	Select alternative

Some experimental support for VFT was provided by León (1999) who compared the use of VFT and AFT in a two-stage study. The first stage investigated whether objectives were different for VFT and AFT and the second stage whether either set was advantageous for choosing. In the first stage students (with 80 hours training in decision analysis) listed objectives for choosing between advanced level courses and once a list had been created grouped the objectives. Half of the participants was primed to engage in AFT by listing objectives on their experience of recently taken courses, and half to engage in VFT by being

presented with 17 open-ended questions (based on Keeney, 1994) to elicit objectives relevant to choosing a course. The VFT group produced objectives that were larger in number (12 as opposed to 5) and more hierarchical (three global objectives as opposed to none). In the second stage another set of students rated the objective hierarchies produced by VFT and AFT in terms of their suitability for choosing courses. Using the VFT hierarchy the students "came up with alternatives that are more innovative, with the greatest possible range, and with more foreseeable consequences. Moreover, the most desirable consequences are taken into account in a more effective way is more complete, more operational, equally concise, and more understandable" (Leon, 1999, p 225[xli]).

Figure 11: Objectives from VFT and AFT (León, 1999, p 221)

Representative Structures of Objectives for VFT and AFT Groups

Value-focused group	Alternative-focused group
1. *Quality of the programs*[1] assessed in terms of:	
1.1. *Attractiveness*[4] (the degree of attractiveness of each program is assessed, except in 1.2, 1.3, and 1.4)	1. *Attractiveness*[4] (attractiveness of each program is assessed, except in its applied aspect)
1.2. *Novelty*[12] (the degree of novelty with respect to main subjects is assessed)	—
1.3. *Applicability*[9] (the applicability of the program's content in terms of work activities is assessed)	2. *Applicability*[9] (the degree of applicability of the program's content in terms of work activities is assessed)
1.4. *Congruence*[5] (the degree of congruence of the program with the chosen specialty is assessed)	—
2. *Quality of teaching*[2] assessed in terms of:	3. Intrinsic *difficulty*[18] (difficulty of learning the content of the course is assessed)
2.1. *Teacher*[8] (the teacher's pedagogic capacity is assessed)	4. *Teacher*[8] (the teacher's pedagogic capacity is assessed)
2.2. Usefulness of *practicals*[10] (the usefulness of the practical is assessed)	—
2.3. Effective *learning*[11] (whether at the end of the course students feel they have truly learned is assessed)	—
—	5. *Form of assessment*[27] (the desirability of form of assessment is assessed in terms of personal preferences)
3. *Advancement of ones's studies*[3] assessed in terms of:	
3.1 Easiness for *passing*[7] (assessed on the basis of the previous year's pass rate)	
3.2 *Compatibility*[6] (assessed on the basis of timetable compatibility)	

Note. Each italic term corresponds to an objective. The number in superscript corresponds to the label of the objectives in Tables 1 and 2.

Using values to identify decision opportunities and decision outcomes to reassess values

As Keeney is aware specifying values also enables decision-makers to recognise opportunities

to fulfil their values; it is also the case that decision-problems will throw up issues where even the most thoughtful of decision-makers have not contemplated the values at stake, or how they apply in particular circumstances. So even if decision-makers have developed a list of values these will need developing for particular decisions.

Decision-makers should assess how well the decision outcome has met their objectives (values) in order to adapt or change their plan. Equally the realisation of the outcome provides an opportunity for decision-makers to assess whether the values they based their choice on are enlightened – with the benefit of experience do they still endorse their values[xlii]. The table below integrates these activities into an extended model of value-focused thinking.

Table 17: Stages of extended VFT

Stage	Extended value-focused thinking
1	Specify values
2	Recognise decision-problems and opportunities
3	Further specify values (if required)
4	Create alternatives
5	Evaluate alternatives
6	Select alternative
7	Carry out choice
8	Assess outcomes in terms of values Reassess values in terms of outcomes

Stage 1: The Decision-Problem

A key task for the decision-maker is to specify what they are trying to decide about. Hammond *et al.* (1999) note that decision-makers' perception that they face a decision-problem is triggered by events[xliii]. The nature of the trigger can lead to an arbitrary, and unhelpfully constrained, specification of the scope of the decision (e.g. through AFT).

a) Analysing the decision-problem

The tasks for exploring the decision-problem focus on two related issues:

i)   Understanding the nature of the situation confronting the decision-maker (testing the constraints and assumptions and identifying the essential elements in the situation)

ii)   Specifying the decision-problem to be worked on (understanding how the trigger has framed the decision and establishing the sufficient but workable scope)

These tasks are related as defining the decision-problem determines the relevant aspects of the situation to be considered and changes in understanding of the situation can lead to redefining the nature and scope of the decision-problem. These tasks should be approached with the proper attitude, recognising the significance of a good decision-problem definition, and devoting the right amount of time and energy to the task (bearing in mind the importance of the decision and the time and emotional energy available for tackling it).

b) The metadecision

Hammond *et al.* recommend at stage 1 briefly thinking about the other stages in order to get an overview of the decision. Russo and Schoemaker (2002) call the task of getting an overview of the decision-problem and working out how to tackle it the 'metadecision', and recommend that decision-makers should consider where the difficulties lie and hence where the most attention is likely to be required.

 Stage 2: Objectives

Keeney (1999) notes that Peters and Waterman in <u>The Pursuit of Excellence</u> refer to their "one all-purpose bit of advice for management…figure out your value system"; a goal often neglected by the impatient decision-maker who hurries onto choosing and acting.

a) Step 1: Identifying Objectives:

Keeney (1992, chapter 3) and Hammond *et al*. (1999, chapter 3) recommend identifying 'objectives' (or values in the terminology used here), through the questions in table 18.

Hammond *et al*. (1999) warn against two pitfalls in identifying objectives: (i) concentrating on the tangible and quantitative over the intangible and subjective; (ii) over-focusing on the short-term, a tendency that taking different time perspectives can challenge.

Table 18: Questions for identifying values/objectives

Source	How To Ask
A Wish List:	If there were no limitations at all what would the objectives be?
Bottom Line:	What is the bottom line?
Examine Tradeoffs:	What are the tradeoffs between?
Existing Alternatives:	What makes one alternative better than another? What are the objectives of each alternative?
Hypothetical Alternatives:	What is a perfect alternative and what makes it perfect? What is a terrible alternative and what makes it terrible? What is a perfect alternative for a particular objective and what other implications would this alterative have?
Current problems:	What problems are being worked on and what does this suggest about objectives that are being pursued? What needs to be changed from the status quo and why?
Consequences:	What are the consequences of the alternatives and why do these consequences matter? All these consequences are [economic] – what other kinds of consequence matter? Are there consequences that matter but that you feel unable to influence?
Goals and Constraints :	What objective is implied by the goal/constraint (e.g. why does it matter keeping costs below 20%)?
Guidelines and regulations:	What objectives are suggested by laws, regulations, mission statements, policy guidelines, strategic plans and incentive systems?
Different Perspectives:	What would other stakeholders think are objectives from their perspective? Where would you like to be in ten years time? If you were shipwrecked for ten years and returned to this situation what would you find intolerable? Ask others who have faced similar situations what is important
Use of strategic objectives:	What objectives for this situation do your strategic (over-arching) objectives suggest?
Use of generic objectives:	As a x type of decision the following objectives are often considered….Identify which are relevant to your decision[xliv]
Open questions:	Other than these objectives does anything else matter?

b) Step 2: Structuring Objectives:

On completing step 1 the decision-maker will likely have a long list of objectives/values. Step 2 involves putting these into a coherent and manageable order. After converting the list into succinct objectives using a verb and object form (e.g. minimise cost, be intellectually challenged) these objectives can be ordered in two different ways: as a hierarchy of objectives/values and as a means-end network (Keeney, 1992).

An objectives/values hierarchy is built by specifying what a high-level or fundamental objective/value is constituted by. See the figure below for an example.

Figure 12: An objectives hierarchy for safety of automobile travel (based on 1992, p 70):

The rationale is that once objectives/values have been specified in this way it is easier to determine how they can be satisfied. The depth of the division of objectives/values is governed by striking a balance between breaking the objective/value down into more detailed parts that allow alternatives to be easily assessed and the fact that "fewer objectives makes it easier to get a feeling for the decision as a whole and limits the analysis required" (Keeney, 1992, p 80). Clearly there is more than one way to break down an objective/value, and part of the art is breaking it down in a way that illuminates the decision-making task.
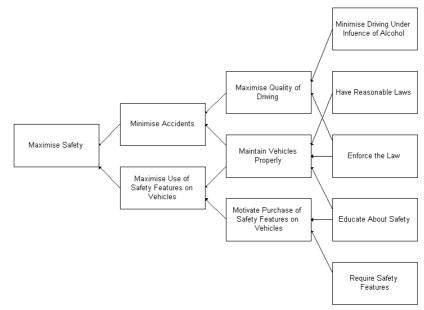
In a means-end network objectives/values are causally, rather than conceptually, linked. In the example below, a means-end network for safety of automobile travel, the objectives to the right

are the means to the objective on the left. For example minimising driving under the influence of alcohol is a means to maximising the quality of driving, which is a means to minimising accidents, which is a means to maximising safety. The network can be used both to identify more fundamental objectives (going left: "why is this important?") and alternatives (going right: "how do this?"). Maximising safety is a fundamental objective as within the context of automobile safety it makes no sense to ask "why is this important?"

Figure 13: A Means-End Network for safety of automobile travel (based on 1992, p 70)

c) Are the objectives/values enlightened?

Keeney writes, "Value-focused thinking is value-neutral" (1992, p 52) and explains that this is because any values can be structured into a hierarchy of objectives and a means-end network. This is perhaps admirable in that it enables decision-makers to explore what matters to them, but it does also leave the structuring process open to the charge that any values, including unenlightened values, might be promoted[xlv]; although specifying objectives/values in the detail suggested, and noting where there is inconsistency through internal conflict, might lead to rethinking perhaps inchoate and unenlightened values.

d) A note on using codes and guidelines

Hammond *et al.* (1999) suggest consulting codes, guidelines, mission statements and so on but provide little analysis of whether, and to what extent, these should be relied upon. In some cases these can resolve a decisional dilemma but Weston (2001) argues there are four reasons to think that this will not always be the case:

i)   Codes are too general - they provide guidelines but how to apply these guidelines is often not specified.

ii)   The values either within the code or between codes can conflict.

iii)   Codes can lag behind changes to the societal situations within which the code was designed to work.

iv)   The values in the codes themselves can be challenged. Weston writes, "[e]ven well-established professional codes of ethics can still be challenged on ethical grounds. Reconsideration and debating about such codes from a larger ethical point of view may be one of the obligations of a professional too" (Weston, 2001, p 301).

A fifth reason is that situations can arise which have not been anticipated by the code writers and a sixth is that often decisional dilemmas involve additional personal values, about which codes are necessarily silent.

e) On the need for conceptual analysis of value (and other) concepts

Hammond *et al.* propose that decision-makers should clarify the concepts that they use but provide little advice for how to do this beyond asking "what do you mean by x?" Keeney's value hierarchy for 'maximising safety' is not a conceptual analysis as what is meant by either 'maximising' or 'safety' is not explored. The philosophical literature includes tools to carry out conceptual analysis. These methods require an interplay between the exploring the network of concepts within which a particular concept is embedded and how the concept is 'cashed out' in experience. For example Wilson (1963) shows how to clarify concepts by using positive, negative and borderline cases to identify and assess possible criteria for the application of the concept. LeBon (2001) provides an illustration. The Kantian inspired method of regressive abstraction begins with an experience and seeks to uncover the criteria which make the particular experience possible. In the form of 'Socratic Dialogue', developed by Nelson, this

has also been used in organisations to help clarify concepts underlying decisions (Kessels, 2001).

Stage 3: Alternatives

While Simon argued that the Rational Choice Model falsely assumed that human beings would have the hyper-rationality needed to assess all alternatives (1955, 1983, 1997), the normative challenge is often not to *reduce*, but to *broaden* the range of alternatives that decision-makers are willing to consider. Common pitfalls that limit the search for alternatives are sticking with the status quo, only making small changes to the status quo (incrementalism), taking the first possible solution (satisficing), choosing from among alternatives presented by others, and, through delaying too long, being stuck with what's left.

Decision-makers need to be proactive in creating options by using the value hierarchy and means-end network. Hammond *et al.* (1999) offer some alternatives to how to think about alternatives:

Table 19: Alternative ways to think about alternatives

Type of alternative	When to use
Process:	When a conflict can be resolved by deciding on the process used to decide – for example tossing a coin, voting, binding arbitration
Win-win:	When a decision requires help from others, find an option that is a win for all parties
Information-gathering:	In the case of important uncertainties are there alternatives that help gather information (e.g. medical tests)
Time-buying:	When more time is needed to understand the decision-problem and gather important information. Question deadlines but note whether delaying precludes options.

Stage 4: Consequences

To be able to assess the alternatives identified at stage 3 it is necessary to try to find out how well these alternatives are likely to satisfy the objectives identified at stage 2. Ways to do this include writing a free-form description of what the alternatives will be like, and checking information about the alternatives for appropriate accuracy (is it true?), completeness (what else do we need to know?) and precision (is the information too vague?).

Once sufficient information has been analysed the range of alternatives can be pruned by eliminating weak alternatives, and the rest compared using a consequences (alternatives and values) table to eliminate 'dominated' and 'practically dominated' alternatives[xlvi]. A dominated alternative is one that fares worse against all the objectives than another alternative. A practically dominated alternative is one that fares a little better on one or two objectives/values but it is intuitively obvious that it meets the objectives/values less well overall.

a) Refining alternatives through moulding to meet values
In choosing decision-makers compare the set of alternatives they have developed against their identified values. In nearly every case not every value will be captured by any one of the alternatives. When decision-makers realise this, they can revisit their alternatives to consider whether there are ways that alternatives can be moulded by combining multiple alternatives, or refining alternatives, to increase the likelihood that their choice will capture as much of what matters to them as possible.

Stages 5, 6 ,7 and 8: Tradeoffs, Uncertainty, Risk Tolerance and Linked Decisions

Hammond *et al.* note that at any stage it might be reasonable to make a choice (more or less intuitively) if the tasks clarify the decision sufficiently. The first four stages seem more crucial than the fifth, as the first four enable the clarification of the decision-problem, values, alternatives and a comparison of the alternatives against the objectives and values. Tradeoffs, Uncertainty and Risk Tolerance provide further tools for analysis if a choice cannot be made, or if uncertainties need to be further explored.

a) Tradeoffs

'Even swops' is a sophisticated version of Franklin's suggestion to cross off objectives/values that are equally well-met by the alternatives[xlvii]. 'Even swops' requires the decision-maker to specify how much of one value another kind of value is equivalent to (e.g. how much profit is equivalent to 5% market share, or how much commuting time is worth what size of house). In this way values that are on different scales can be more precisely traded-off against each other.

b) Uncertainty and Risk Tolerance

If uncertainty about the consequences makes choosing problematic, risk profiles can be generated and decision trees built. If uncertainty continues decision-makers might need to examine their risk tolerance.

c) Linked Decisions

These are decisions, which affect future decisions by opening and foreclosing alternatives (e.g. choosing a degree opens and forecloses career choices, choosing how to market a drink opens and forecloses ways to sell it). Although placed as the final stage this has applicability at the beginning of the process in framing the decision-problem (how does the decision-problem relate to other and future decisions), and when making a choice (through bearing in mind how the choice impacts future choices). In environments where there is great uncertainty flexible plans can be adopted.

Table 20: Kinds of flexible plans

All weather plans:	Make a choice that is good for most situations, but not great for any
Short-cycle plans:	Make the best choice and reassess often
Option wideners:	Choose to increase options at a later date
"Be prepared" plans:	Create backup plans for dealing with contingencies

How suitable is the process for all?

As well as the general issue of how suited divide and conquer deliberative processes are to all decision-makers, aspects of PrOACT also might not be suitable to those who lack a mathematical 'bent'. This applies particularly to the later (and more optional) stages of making even swaps, generating decision trees and carrying out sensitivity analyses. Even for those who lack this bent it is possible to cover some of this ground less formally with more qualitatively orientated questions. Even swaps can be probed by asking how much one objective seems to balance another, decision trees by the uncertainties involved and whether these are likely to impact on the realisation of the objectives, and sensitivity analyses by where uncertainties lie and how big a difference these uncertainties would need to make in how well an objective is met to be practically significant.

5.2 Psychological Traps

The heuristics and biases literature

Hammond *et al*. draw upon the heuristics and biases literature to identify common biases–'traps' - that can subvert the PrOACT process (see also: Hammond, Keeney and Raiffa, 2001b; Russo and Schoemaker, 1989, 2002). They provide 'debiasing' guidance for how to avoid these traps (cf. Fischhoff, 1982; Larrick, 2007).

The majority of these traps are most naturally connected to belief formation (anchoring, sunk cost, confirming evidence, overconfidence, recallability, neglecting important information and prudence); status quo and sunk-cost are connected more to the selection of options as 'live' possibilities, and framing to the weighting of objectives.

Traps to Psychological Traps

There is debate within the behavioural decision-making literature about the nature of traps or biases and whether the heuristics upon which they are based are adaptive or maladaptive (e.g. Girgerenzer, Todd, and the ABC Research Group, 1999).

There is some parochialism to this list of traps. While one set of traps are those found within the behavioural decision-making literature that Hammond *et al*. (1999) draw upon, other sources include the fallacies of the logic/informal logic/critical thinking literature, the attributions of the social psychology literature, the defence mechanisms of the psychodynamic literature and the distortions of the cognitive therapy literature[xlviii]. Within these literatures there are similar debates around whether alleged traps really are so.

The critical thinking literature contains two useful correctives – the fallacy-fallacy and the good reasons approach. The fallacy-fallacy reminds decision-makers that a belief justified fallaciously is not necessarily wrong. The good reasons approach reminds decision-makers that the justification of a belief depends upon having good reasons that support it, rather than bad reasons that undermine it (LeBon and Arnaud, 2001).

Table 21: Some Psychological Traps and how to avoid them

Trap	Avoid the trap by…
Anchoring: over-relying on first thoughts, initial judgments	View the decision-problem from different perspectives. Think about the decision before consulting others (and becoming anchored to their ideas). Seek information from a variety of people to widen your frame of reference. Be careful to avoid anchoring people from whom you solicit information and counsel.
Status quo: keeping going, hanging on to what you have come what may	Remind yourself of your objectives and ask how well they are served by the status quo. Think of other alternatives besides the status quo. Ask if you would choose the status quo if it wasn't the status quo. Don't default to the status quo if other, better alternatives, are hard to choose between.
Sunk-cost: over protecting earlier choices and their investment when the outcome is poor	Seek out and listen carefully to the views and arguments of people who weren't involved in the original decision. Examine why admitting to an earlier mistake is distressing. Make being second-guessed by others an explicit consequence to be evaluated.
Confirming evidence: seeing what want to see	Play Devil's Advocate, build counterarguments. Be honest with yourself – are you gathering information simply to confirm? Expose yourself to conflicting information; don't be soft on confirming evidence. When asking others for advice don't use leading questions inviting confirming evidence.
Framing: Distortions through gains/losses seen from different reference points	Make sure the way you frame the problem advances your fundamental objectives. Reframe the problem in different ways, looking for distortions. Reframe in neutral, redundant ways that combine gains and losses or embrace different references points.
Overconfidence: being too sure of yourself	Avoid being anchored by an initial estimate. Challenge your own figures and the figures of experts and advisor, by identifying ways estimates could be wrong. Substitute facts for opinions wherever possible.
Recallability: focusing on dramatic, easy to remember, events	Check your assumptions aren't being swayed by memorable events. Try to get statistics; don't rely on your memory. When there aren't direct statistics build up a risk assessment by identifying relevant data.
Neglecting relevant information: especially base-rates	Consider base-rates explicitly in your assessment. Keep different kinds of probability statement separate.
Prudence: slanting probabilities and estimates to play it safe	State your probabilities and give your estimates honesty. Document the information and reasoning used to make estimates so others can understand them.

5.3 Indecision or indecisiveness and the role of emotions

Indecision or indecisiveness?

a) *Terminating the process with a choice*

Hammond *et al.* suggest terminating the process when the decision-maker is sufficiently confident they can make a good choice. This might happen before reaching the stage of tradeoffs as any of defining the decision-problem, clarifying objectives, creating alternatives or clarifying uncertainties might make the choice so intuitively obvious that no further reflection is required. In the case that the decision-maker is still undecided the additional stages are designed to help decision-makers further clarify the nature of the choice so that a decision becomes more obvious.

b) *Using qualitative and quantitative thinking to decide*

A careful analysis of Hammond *et al.* suggests that this clarity is assumed to be reached through first approaching the task qualitatively and then with increased quantification. If building a consequences table and eliminating dominated and practically dominated doesn't yield a choice (a qualitative approach) then compare alternatives using even swops (a quantitative approach); if even swops does not produce a choice then build a risk profile (mostly qualitative with some quantification); if this does not produce a choice then calculate using a decision tree (a quantitative approach); if this doesn't produce a choice perhaps this is because of lack of clarity over how much risk the decision-maker will tolerate so specify the desirability of the consequences (this can be qualitatively expressed – e.g. highly desirable) and the chance of the different outcomes (expressed quantitatively - e.g. 50-50); if no choice is yet "abundantly clear" (1999, p 136) the risk tolerance is quantified with desirability scoring and a calculation made to determine the best choice. Concluding the case Hammond *et al.* have used to illustrate many of their ideas they write; "[r]elying on her calculations and the careful thought that preceded them, Marisa makes her choice" (p 142). No further suggestions are offered if at this point the decision-maker is still unable to choose.
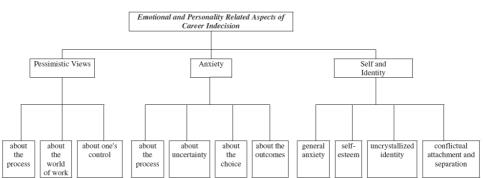
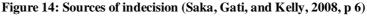*c) Is indecision or indecisiveness the difficulty?*

This process raises the question of whether the goal is to refine the decision so that a clear/best choice is made, or whether the goal is to enable the decision-maker to move from a state of indecision to decision. Is the difficulty to be solved one of indecision or indecisiveness?

Hammond *et al.* recognise that the time and energy put into a decision should depend upon the importance of the decision. So in the case where much hangs on the decision and its seems likely that further analysis can provide important clarification the lack of a decision can be due to (wise) indecision. In weighing whether they are in a position to decide decision-makers should note whether there are diminishing returns to further investment in the process of deciding (Herek, Janis and Huth, 1989; Elster 1999a, 1999b) or whether they are in the 'zone of indifference' (Klein, 2003) where any differences between how alternatives meet objectives are practically insignificant or cannot be sufficiently further clarified so that 'plumping' becomes sensible[xlix].

d) Sources of indecision

Perhaps though difficulties in deciding are due less to indecision, being rather the outcome of indecisiveness. Saka, Gati and Kelly (2008) propose the following 'emotional and personality related' sources of indecisiveness[1]:

Figure 14: Sources of indecision (Saka, Gati, and Kelly, 2008, p 6)

These sources are explained in the table below:

Table 22: Sources of indecision explained (based on Saka, Gati, and Kelly, 2008, pp 3- 6)

Aspect of indecision	Meaning
Pessimistic views	*Connected to grave doubts about the possibility of a good outcome to deciding*
i) about the process:	Low self efficacy expectations (Bandura, 1977) in a certain domain may lead to avoid dealing with tasks and challenges in that domain.
ii) about the world of work:	Pessimistic individuals tend to focus primarily on problems and disadvantages and show depression, hesitation, self-doubt, concentration difficulties, feelings of guilt and inferiority, and harsh self-criticism.
iii) about one's control:	The degree to which people attribute events and changes in their lives and environment to internal (e.g., ability, skills, effort) versus external factors (e.g., luck, chance, destiny; Rotter, 1966). Those with an external locus of control may be less likely to actively pursue solutions to problems and challenges. In addition, perceiving a lack of control over the process and outcomes may lead to both indecision and indecisiveness because it reinforces the perception that it is not worth investing in the process, and thus it decreases personal motivation.
Anxiety	*Connected to the choice process*
i) about the process:	Feelings of stress and anxiety arising prior to the decision-making process or anxiety evoked by perfectionism about the process.
ii) about uncertainty:	There are three facets: (a) uncertainty about the future, (b) anxiety about being in an undecided state, and (c) anxiety related to low tolerance for ambiguity.
iii) about the choice:	Anxiety connected to the choice can arise from (a) perfectionism about choosing (i.e., having to find the "perfect occupation"), (b) fear of losing other potentially suitable options, (c) fear of choosing an unsuitable ("wrong") occupation, and (d) anxiety about one's responsibility for the act of choosing (especially a wrong one).
iv) about the outcomes:	Worries about the implications of the actualization of the chosen alternative: for example, the fear of failure or of not fulfilling one's expectations and preferences in the chosen occupation.
Self and identity	*Connected to difficulties in forming a stable, independent personal and vocational identity and a positive self-concept*
i) general anxiety:	General anxiety is a broader and more stable personality trait rather than an emotion connected with the process involved in making a specific decision.
ii) self-esteem:	Decision-makers seek to actualize their perceived potential and enhance their feelings of self-worth (those with low self-esteem are more indecisive).
iii) uncrystallized identity:	Difficulties in forming a stable sense of personal identity, which may be manifested in difficulties in expressing consolidated beliefs, values, preferences, and life goals.
iv) conflictual attachment and separation:	Conflictual attachment is related to excessive criticism, lack of satisfaction, and lack of support from significant others regarding the individual's preferences and decisions. Conflictual separation is related to the excessive need for others' approval and for pleasing significant others at the expense of one's own preferences and goals

It is possible that PrOACT might help with some of these sources:

Pessimism: Carrying out the process could change the decision-maker's pessimistic views about their capacity to make wise decisions, the level of control they can exert over the world (or the wise recognition that this is limited, in accord with the Serenity Prayer) and, if they

begin to make better decisions, about their prospects in the world. The catch is that pessimism might deter them from trying a structured decision-making process in the first place, or lead to abandoning the process too easily if difficulties arise. Decision coaching might help with these problems.

Anxiety: PrOACT might help to combat some sources of anxiety by providing a structured method to help make a wise choice, although decision-makers would have to trust the process enough for this to be the case; again decision coaching might help. León suggests that value focused thinking "is less anxiety-inducing: decision-makers, rather than having to defend themselves in the face of a problem with which they are saddled, are explorers seeking to satisfy their fundamental objectives" (León, 1999, p 214). No evidence is offered to support this assertion and not everyone finds the idea of being an explorer comfortable. As with pessimism it might be that repeated (if successful) use of the process would lower anxieties over the long term[li]. It is possible that those with tendencies to perfectionism and anxieties about responsibility could be encouraged by the process to spend too long in the 'zone of indifference'; alternatively recognising limits to knowledge about alternatives and the future might counter these tendencies.

Self and identity: PrOACT might help to crystallize a sense of identity through consolidating values. While the process can help decision-makers clarify their objectives this is of limited help if, through low self-esteem, decision-makers do not think they deserve to fulfil their objectives[lii]. Alternatively - perhaps because of too high self-esteem - decision-makers might not consider that any objectives except their own personal objectives deserve to be fulfilled producing a narrowness in the objectives the decision is based around. It is more doubtful whether the process could help with general anxiety, and conflictual attachment and separation, both of which might require more extensive therapeutic intervention.

Emotions in the process

Hammond and Raiffa, asked in an interview what role emotion should play in good decision making, replied that "its very practical to include your emotions" (1998, p 78) but their analysis of how to include them is limited.

Hammond *et al.* (1999) recognise the emotional nature of decisions: "Decision problems are called "problems" for a reason. Rarely, after all, do we make decisions for the fun of it. We make decisions because we have to deal with difficulty or complicated circumstances. We're in a quandary, we're at a crossroads, we're in trouble – and we need to find a way out" (p 17-18).

The vignettes they provide are full of emotions – for example:

> Karen Plavonic hasn't had a good nights sleep in weeks. Her stomach is always in knots. Day and night she anguishes over whether to accept a $300,000 offer to settle her personal injury lawsuit…she feels she may have contributed in a small way to the automobile accident…she doesn't want to look foolish for "throwing away" the settlement…she can't overcome residual feelings of guilt about the accident…she keenly feels the possibility that she might break down in court, jeopardizing her case…her soul-wrenching inner debate…her emotionally devastating indecision…the psychological stresses associated with going to trial…regret if she loses or elevation if she wins (1999, p 122-123).

In the vignette these and other emotional states are limited to being considered as part of the outcome of the decision; the value at stake being the decision-maker's future phenomenological experience – what choice would enable Karen to avoid feeling regret after she has chosen. The emotions that keep her awake at night – anguish, fear of looking foolish, guilt, prospective regret and elevation - are not considered in the vignette as containing potential insights that would help her make the decision wisely.

Hammond *et al.* do seem to recognise that emotions, or at least desires, can contain important insights as they write, "For important decisions, only deep soul-searching will reveal what really matters – *to you*" This is because "your real desires may actually be submerged – buried beneath the desires others have for you, beneath societal expectations and norms, beneath everyday concerns". They do suggest that emotions, perplexity and discomfort, can discourage soul-searching as "this kind of self-reflective effort perplexes many people and makes them uncomfortable" (1999, p 33, emp. in original).

A suggestion (Hammond and Raiffa, 1998) for the use of emotions when evaluating alternatives is to check if you feel uncomfortable with the resulting choice. If you are uncomfortable either:

(i)   keep on probing or;

(ii)   wait for your emotions to catch up

No suggestions are offered for which of these alternatives to take or if probing further exactly what to probe.

There is a similar suggestion in the section on risk tolerance; when assigning desirability scores to the consequences decision-makers should "check to be sure that all your scores are consistent, and adjust them as needed to reflect your true feelings about the respective consequences" (1999, p 137). No clues are offered for how to identify feelings or distinguish whether or not they are 'true'.

Two of the psychological states from the Janis section also seem implied: Keeney (1992) notes that decision-makers need to *accept* the need to make a decision, and Hammond *et al*. (1999) that decision-makers need to examine why admitting to an earlier mistake is distressing, presumably part of *letting go* of costs sunk in past choices. No advice on how to accept or examine distress is offered.

6. Conclusion: Integrating the Models

6.1 Comparing the models

As the table below demonstrates, the models of decision making all implicitly adopt a wider definition of a decision than just a choice. According to the definition of a decision developed in chapter two, the decision components are sometimes spread across the different divisions of the stages identified in the models – where this is the case *italics* are used to indicate the part of the stage defined by the theorist relevant to the decision component.

Table 23: Decision component across the models

Decision component	Kepner-Tregoe Rational Manager	Janis Vigilant Decision Making	Nutt Discovery Process	Hammond-Keeney-Raiffa PrOACT
Decision-Problem Understanding situation and clarification of the decision to be made	Situation Appraisal Potential Problem and Opportunity Analysis Decision Analysis *(Clarifying Purpose – the decision and its level)*	Appraising and accepting the challenge	Understand Claims	Problem
Values/objectives A set of important values and objectives at stake	Decision Analysis *(Clarifying purpose – list of objectives)*	Searching for alternatives *(Searching for Goals/Values)*	Set a Direction	Objectives
Options and Consequences A set of credible options and insight into consequences	Decision Analysis *(Finding and Evaluating Alternatives, Assessing Risks)*	Searching for alternatives *(Searching for Alternatives)*	Uncover Ideas	Alternatives Consequences
Choice Selection of best option	Decision Analysis *(Making a Decision)*	Deliberating and becoming committed	Evaluate Ideas	Tradeoffs Uncertainty Risk Tolerance
Action Effectively carrying out the choice	Potential Problem and Opportunity Analysis	Deliberating and becoming committed	Implement the Preferred Idea	Tradeoffs *(Win-Win Thinking)*
Monitoring and Adapting Testing whether the choice has realised values and modifying as appropriate	Situation Appraisal Potential Problem Analysis	Adhering to the decision		Linked decisions

Comparing the models against the decision components also enables a snap-shot view of those aspects of a decision where more or less attention is devoted – for example Hammond-Keeney-Raiffa provide very little coverage after the choice has been made (although they do include Linked Decisions and Win-Win Thinking to get others on board), while Kepner-Tregoe cover this topic extensively under Potential Problem and Opportunity Analysis.

Theorists also differ on the extent to which they tend to provide exhortations about the importance of particular decision goals (and warnings about not taking the goals seriously) or detailed suggestions for how to achieve goals. Generalising very broadly indeed, Kepner-Tregoe and Hammond-Keeney-Raiffa tend to provide detailed guidance for how to carry out tasks while Janis and Nutt tend to provide more in the way of warnings and exhortations. That this is a very broad generalisation is shown by the fact that Janis provides detailed guidance for the use of the Special Procedures and Nutt provides advice for, among other aspects, interpreting claims and the effectiveness of different kinds of options. Moreover Hammond-Keeney-Raiffa seek to encourage decision-makers to adopt certain attitudes when approaching decisions, when for example they emphasise the impact of the decision-problem definition on the success of decision making and hence the need to devote appropriate attention to this too-often glossed-over aspect.

The broad generalisation is most justified when examining some of Janis' Prescriptive Norms where decision-makers are urged to, for example, "intensively search for new information" and "make detailed provisions for implementing and executing the chosen course of action" without much in the way of suggestions for how to search for new information or make detailed plans. This tendency is perhaps because both Nutt and Janis assume that Vigilant Decision Making or the Discovery Process are in the repertoire of decision-makers and that the main danger is 'falling off the wagon' – a factor which also explains why they devote considerable attention to explaining how this might happen through Non-Vigilant Decision Making, Emotive Rules and Idea Imposition. Kepner-Tregoe and Hammond-Keeney-Raiffa by contrast seem to hold the position that decision-makers are less knowledgeable about how to make decisions effectively (or that there are techniques and tasks that require specific knowledge that can improve decision making) so they are explicit in analysing how-to.

The table below provides a summary of some of the strengths and limitations of the models:

Table 24: Some strengths and limitations of the models

Model	Some Strengths	Some Limitations
Kepner-Tregoe Rational Manager	Clarification of different Rational Processes and their interrelationships Detailed account of wide variety of tasks suitable to different aspects of a decision Extensive testing in practice	Nothing on ethics Lack of empirical research Little on emotions
Janis Vigilant Decision Making	Inclusion of emotional elements Account of why decision making fails (Conflict Model) Empirical research supporting Special Procedures and Vigilant Decision Making	Lack of detail on some tasks Little on clarifying the nature of the decision
Nutt Discovery Process	Inclusion of impact of others Inclusion of ethics Account of why decision making fails (Idea Imposition) Empirical research supporting the Discovery Process	Lack of detail on some tasks (sometimes stronger on what not to do, than what to do) Little on emotions
Hammond-Keeney-Raiffa PrOACT	Distinction between alternative-focused thinking and value-focused thinking Very clear and specific set of tasks, suitable to many different aspects of a decision Account of why decision making fails (Psychological Traps) Empirical research on some tasks	Not much coverage of what to do after the choice has been made Little on emotions

6.2 Emotions in the models

Emotions (especially anxiety and doubt), according to the models reviewed play an important role in motivating decision-making processes. According to the Coping Model of Janis too much anxiety or too little anxiety can derail Vigilant Decision Making. Kepner-Tregoe seem to suggest that concern (perhaps an emotional state – they are not clear) is required to motivate the search for trouble spots, and that feeling overwhelmed (with too many concerns listed) can demotivate analysis. Nutt believes that doubt – especially when combined with concern about being seen as indecisive and blamed – motivates the adoption of Idea Imposition. Janis's Special Procedures (and Klein's PreMortem) can be seen as seeking to increase decision-maker's levels of anxiety to challenge complacency and promote Vigilant Decision Making.

Janis and Hammond-Keeney-Raiffa emphasise that emotional states in the decision process impact on whether decision making is successful depending upon whether decision-makers accept/don't accept the challenge, embrace/don't embrace and commit to/ fail to commit to their choice and adhere/fail to adhere despite setbacks, or don't let go/let go of failing plans.

Janis believes that Vigilant Decision Making is undermined by Emotive Rules (e.g. anger's "Retaliate!"; frustration's "Wham! The hell with the consequences") that urge the decision-maker to pursue unwise goals. Both Janis and Nutt also see decision-makers as pursuing emotional needs (for power, status and so on) that have unenlightened values although it is less clear to this writer that these lead to Non-Vigilant Decision Making or Idea Imposition, rather than vigilantly pursing these (unenlightened) values.

Various models provide a role for emotions as motivating further search: Nutt believes that while doubt can lead to Idea Imposition it could also push decision-makers to think more deeply in the Discovery Process; Kepner-Tregoe that decision-makers should ask what is really troubling them; Janis that decision-makers, when they experience vague feelings of repugnance and antipathy triggered when surprised that gut feelings of attachment and aversion differ from the 'objective' Balance Sheet, should search for preconscious desires and fears; Hammond-Keeney-Raiffa that decision-makers should engage in deep 'soul-searching' even if this makes them feel 'uncomfortable'.

When it comes to choice all the theorists discuss the role of emotions –especially as 'gut feelings': Kepner-Tregoe that gut feelings are a source of information (although quite how weighty is left unspecified); Janis that gut feelings can suggest important factors not considered, or be used to tie break options, but that decision-makers should also be wary of (unspecified) 'irrelevant' gut feelings; Nutt believes that 'emotional outbursts' can point to important underlying ethical issues; Hammond-Keeney-Raiffa that in assessing their attitudes to risk that decision-makers should rely on their 'true feelings' and determine whether they are 'comfortable' with their choice and if not probe for why or wait for their feelings to 'catch up'.

When considering the outcomes of options Janis and Hammond-Keeney-Raiffa believe that anticipated emotions should be taken into account so decision-makers avoid experiencing unpleasant feelings of guilt, regret and so on.

6.3 Combining models for a better procedure

Taking ideas from the different models and the additional tasks covered it is possible to develop a more inclusive structured decision-making model. The place of emotions within this model will be considered after theories of emotion have been reviewed.

Goals and tasks for the different stages are summarised below. The appendix provides a complete list of the tasks identified in all the models and the additional tasks suggested when reviewing these models.

Stage 1: understanding the situation and framing the decision-problem

Decision-problems come about because decision-makers have concerns. For decision-makers to understand the situation they face they need to fair-mindedly identify and unpack these concerns, determine which require dealing with, and frame the decision-problem accordingly. Decision-makers who experience paralysis in the face of their decision-problems need 'unsticking'.

Table 25: Goals and tasks for understanding the situation and framing the decision-problem

Goal	Tasks
Get an overview of the situation by:	- Identifying the range of concerns (problems and opportunities) currently facing the decision-maker (Kepner-Tregoe, Hammond-Keeney-Raiffa). - Clarifying how the concerns relate to each other, through linked decisions (Hammond-Keeney-Raiffa). - Accepting the reality of concerns through: Challenging Rationalizations; Emotional Role Playing (Janis).
Find out more about a concern by:	- Understanding the Claim (Nutt) or Trigger (Hammond-Keeney-Raiffa) to the concern and unpacking what it is about. - Appraising the challenge/opportunity (underlying the concern) by investigating: How credible is the information? How important (serious) is the threat/opportunity? How urgent is the threat/opportunity? What is its probable growth? What emotional energy is available for tackling the threat/opportunity (Janis, Hammond-Keeney-Raiffa, Kepner-Tregoe).
Focus on particular concerns through:	- Prioritising concerns, determining which require taking further (Nutt, Kepner-Tregoe, Hammond-Keeney-Raiffa).
Define the decision-problem by:	- Defining the decision-problem by appropriate Level/Scope / Arena of Action (Kepner-Tregoe/Hammond-Keeney-Raiffa/Nutt). - Recognising the social and political dimensions to the decision-problem (Nutt).
Get 'unstuck' through:	- Writing down thoughts about the decision-problem, assessing where information is avoided, assessing ineffective solution attempts, reviewing past decision-making successes for ideas, experimenting with new ideas (Omer and Dar).

Stage 2: developing a set of enlightened values

Developing a set of enlightened values can be approached by creatively building a list of potential values, which can be tested for whether the decision-maker stands by them as enlightened values, and structuring these enlightened values to increase their usability.

Table 26: Goals and tasks for developing a set of enlightened values

Goal	Tasks
Identify potential values/objectives by:	- A Wish List; Determining the Bottom Line; Examining Tradeoffs; Examining Alternatives; Consulting Codes, Guidelines and Regulations; Consulting Strategic Objectives; Needs; Why Questions; Self and Other Approval and Disapproval etc (all); - Outcome Psychodrama (Janis).
Identify enlightened values/objectives by:	- Guidelines and Regulations (Hammond-Keeney-Raiffa; Weston). - Ethics tests, such as the Billboard Test (Nutt). - Dialogue with stakeholders (Nutt). - Conceptual Analysis of core value concepts (Wilson). - Considering different ethical arenas (States of the World, States of Mind, and Character) (LeBon-Arnaud). - Taking different Perspectives (across stakeholders, times).
Structure values/objectives by:	- An Objectives Hierarchy (Hammond-Keeney-Raiffa). - A Means-End Network (Hammond-Keeney-Raiffa).

Stage 3: developing a set of credible options with insight into their possible consequences

Stage 3 has a similar mixture of creative and critical thinking to stage 2, initially with possible options creatively generated and then with these options analysed by exploring their possible consequences.

Table 27: Goals and tasks for developing a set of credible options

Goal	Tasks
Creatively generate options by:	- Asking how objectives can be realised; Challenging assumed constraints; Setting high aspirations to force thinking in new ways; Thinking before consulting others (in order not to be framed by others perceptions); Learning from what others have done; Asking others for suggestions; Giving the subconscious time to operate; Trying to be original ('far out' possibilities); Avoiding dichotomies; (Hammond-Keeney-Raiffa; Janis); - Safe Spaces; Integrated Benchmarking; Repeated Solicitation; Innovation (Nutt); - Varied Perspectives (Linstone); - Concept Fan (De Bono).
Explore possible consequences by:	- Mentally putting self into the future (Hammond-Keeney-Raiffa). - Creating a Free-Form Description (Hammond-Keeney-Raiffa) or Scenario (Janis) of the consequences of each alternative. - Describing consequences with appropriate accuracy (using up-to-date information), completeness and precision (Hammond-Keeney-Raiffa, Kepner-Tregoe), conscientiously taking account of new information or expert judgement even when this does not support the course of action initially preferred (Janis), and bearing in mind the implications of where information might be wrong (Kepner-Tregoe). - Imagining what might go wrong by conducting a PreMortem (Klein) - Judging the seriousness of the risks by the extent and likelihood of adverse consequences and the capacity to prevent or minimize the effect of each adverse consequence (Kepner-Tregoe).

Stage 4: choosing an option to realise enlightened values

Stage 4 is based upon determining how well the different options are likely to realise the set of identified enlightened values for the specified decision-problem given the nature of the on-going situation; decision-makers should choose the option that seems likely to best realise their enlightened values. This process might require changing psychological states and checking whether the decision-maker embraces their choice and is willing to act upon it.

Table 28: Goals and tasks for choosing an option

Goal	Tasks
Testing options by:	- Dialectical Inquiry (Nutt) - Devil's Advocacy (Nutt)
Building a consequences (values/options) table to:	- Eliminate Dominated and Practically Dominated options (Hammond-Keeney-Raiffa) - Mould options to better fit values/objectives - Choose through any of Informed Intuition (Janis), Moral Algebra (Franklin), Even Swaps; Decision Trees; Desirability Curves (Hammond-Keeney-Raiffa)
Changing psychological state by:	- Considering Attitudes to Risk (Hammond-Keeney-Raiffa) - Letting go of previous choices - Adhering to previous choices - Embracing a new choice
Checking 'embracement' of the choice through:	- Scoring willingness to act upon the choice (Whitmore)

Stage 5: effectively carrying out the choice

The choice is carried out effectively through planning the implementation. As well as the more straightforward tasks of identifying the steps to take decision-makers need to be aware of how to manage both themselves and others through difficulties of implementation.

Table 29: Goals and tasks for effectively carrying out the choice

Goal	Tasks
Planning for implementation by:	- Producing an account of the steps required (Janis, Kepner-Tregoe), including the impact on Linked Decisions (Hammond-Keeney-Raiffa). - Determining where the plan is most vulnerable by: asking generic questions; focusing on likely stress points (Kepner-Tregoe); reviewing the PreMortem (Klein). - Specifying the what, where, when and extent of Potential Problems and Opportunities (Kepner-Tregoe) and creating contingency plans (Janis, Kepner-Tregoe).
Managing self by:	- Stress Inoculation to prepare for setbacks, and adhere despite negative feedback (Janis). - Taking minor steps to commitment (Janis).
Managing others by:	- Negotiating social and political barriers through bargaining with stakeholders (Nutt) and developing Win-Win options (Hammond-Keeney-Raiffa)

The final stage requires checking whether the choice is realising valued outcomes, both intended and unintended, and whether changes to the on-going situation require re-thinking the decision. Decision-makers need to balance managing to adhere to a choice through difficulties and letting go when a choice looks unlikely to succeed.

Table 30: Goals and tasks for monitoring the choice

Goal	Tasks
Checking for realisation of outcomes and changing on-going situation by:	- Using the plan to set trigger checks for occurrence of problems and opportunities (Kepner-Tregoe), - Monitoring against identified possible future scenarios (van der Heijden- Schoemaker).
Reviewing the choice by:	- Is the decision still best, all things considered (Janis)? - Are values/objectives realised and reassessing values/objectives in the light of experience.
Reviewing psychological states by:	- Adhering to or letting go as appropriate

As many of the theorists emphasise this is general guidance, to be adopted flexibly and iteratively.

Notes:

[i] Other possible starting points could be Bentham's Felicific Calculus (Bentham, 1789/1979), Kant's Universalisation Test (Kant, 1785/1948) or Aristotle's virtue ethics (Aristotle, 350 BC/1980). The difference between these accounts and Benjamin Franklin's is that Franklin offers a procedure that does not assume any particular theory of value (except a bias towards living an examined life) – an advantage as it helps people think about their decisions without explicitly or implicitly imposing an account of what is valuable upon them.

[ii] The wise balance of intuition and deliberation within complex serious decision-making is an on-going area of research. Analysis of the role of intuition is beyond the scope of this research but some brief remarks are in order. Despite the rhetoric of much that is written and the assumptions behind research agendas it is clear that this is not

an 'either or' as all the deliberative models give a place for intuitive, non-conscious, processes (see Franklin above and the other models), and the intuitive models tend to give a role for deliberation as well (see Klein, 2003). Advocates of intuitive decision-making focus on different components of a decision. Damasio's somatic marker hypothesis (1994) claims that the production of a set of plausible options should be intuitive but the choice itself should be made deliberatively from within this set. Wilson (2002; based on Wilson and Schooler, 1991; Wilson, Lisle, Schooler, Hodges, Klaaren, and LaFleur, 1993) and Dijksterhuis (2008) suggests the choice itself should be made intuitively although Dijksterhuis claims that deliberative thought should be used before the moment of choice to reflect upon values and options, while Wilson seems to imply that deliberative thought about this should be avoided as well. Klein (1998, 2003) that the recognition of important aspects of a situation (for example that a baby has a medical problem) are made through an expert's intuitive capacity to pick up vital clues. Thagard's "informed intuition" model (2006), which combines a mixture of intuition/emotion and conscious deliberation through different aspects of the decision, is closest to the model proposed here, although choice is largely advocated to be made intuitively/emotionally and there is little role for exploring the intentionality of emotions.

[iii] At least when stuck as drawn to more than one option – when the vast weight of reasons is on one side this is not difficult to do intuitively. When options are finely balanced decision-makers are in the 'zone of indifference' (Klein, 2003) where any choice is as good as another.

[iv] Kepner and Tregoe (1981) limit the forth process to Potential Problem Analysis but Spitzer and Evans (1997) are clearly right to include the identification of potential opportunities as well.

[v] In their description Spitzer and Evans combine Kepner and Tregoe's stages 1 and 2 into one stage but the process is the same. This table is built from combining elements from Tregoe and Kepner (1981) and Spitzer and Evans (1999)

[vi] Kepner and Tregoe offer very little on how to scan the horizon for possible problems and opportunities, an issue covered much more fully by Day and Schoemaker (2006)

[vii] To use Mitroff's terminology the right problem is approached, so that the error of 'solving the wrong problem precisely' is avoided (1998).

[viii] Senge 1990), Senge, Kleiner, Roberts, Ross, and Smith, (1994) and www.mindtools.com provide a range of tools for systems thinking.

[ix] This table is built from combining elements from Tregoe and Kepner (1981) and Spitzer and Evans (1999)

[x] This question is further explored in Vroom and Jago (1988). Rogers and Blenko (2006) argue that clear decision-making roles enhance organisational performance so organisations need to clarify "who has the D". They distinguish decision-making roles of: recommending (making a proposal and gathering input), agreeing (by those with veto-powers), inputting (providing consultation), deciding (the person with formal authority and accountability) and performing (by those with responsibility for execution).

[xi] The use of MUSTs is a variety of threshold decision-making (see below).

xii Tregoe and Kepner also present a confusing version of the stages listing five on page 12, and four in chapter 6

xiii This is consistent with the view that information search needs to be contingent in accordance with the account of wise decision making in chapter two.

xiv 'Innocence' is an antidote to what has been called 'set' (Lutchins, 1942) or 'functional fixedness' (Duncker, 1945), dangers for those with expertise (cited in Robertson, 2001). More colloquially an expert has been defined as someone who lets their knowledge get in the way of their further learning.

xv While the use of scenarios was developed within the organizational context of Shell management, scenarios can be used for any decision in which the future is somewhat unpredictable and the decision maker needs to be prepared, as is often the case for career and professional decision making.

xvi Serious decisions are defined as decisions "that evoke some degree of concern or anxiety in the decision-maker about the possibility that he may not gain the objectives he is seeking or that he may be saddled with costs that are higher than he can afford, either for himself personally or for a group or organisation with which he is affiliated" (Janis and Mann, 1977, p 69) Excluded are decisions that are routine, unimportant, or based on simulations and games. As there is little at stake in these decisions they do not generate the stress of consequential decisions, and it is the role of stress that Janis investigates.

xvii The stages are taken from Janis; as with Tregoe and Kepner the conceptualisation of stages, goals and tasks is this author's.

xviii These are based on the values clarification methodology developed by Raths, Harmin and Simon (1966). Examples of these questions are listing 20 things you love to do, what you are proud of, what do you want as your epitaph. Simon (1974) provides 31 value clarification strategies. These values clarification exercises tend to be for personal values rather than ethical values.

xix The use of scenarios in Janis' model differs from the 'scenarios' of van der Heijden (1996). Janis constructs scenarios to understand how options might develop. The scenarios of van der Heijden are constructed interpretations about how the environment might change in the future so that the decision-maker is prepared to adapt their course of action to changing contingencies.

xx In Herek, Janis and Huth these procedural norms are written to apply for groups making policy decisions. These norms are rephrased so they apply more generally.

xxi Welch (1989) criticised the findings claiming that while the outcome of the Cuban missile crisis was good, as Herek et al. claim, the decision-making procedure used by the US should instead have been categorised as poor as it failed to meet five of the seven norms of vigilant decision making. While agreeing that "[i]t would be odd to hear someone advocate a process that did not make use of the available information…all other things being equal" (Welch, 1989, p 439) in order to deal with decision-problems quickly "we should hope and expect that a decision maker will be able to identify a fairly narrow range of alternatives promptly, and devote scarce resources to their proper exploration" (ibid, p 442). Thus, "[w]hat Herek, Janis and Huth consider to be signs of pathological

decision making were, under these conditions, necessary and appropriate to the circumstances" (*ibid*, p 441). Herek, Janis and Huth (1989) respond that Welch attacks an (unboundedly rational) straw man version of vigilant decision making. This debate can be explored by focusing on one example. Herek *et al.* (1987) coded US decision making in the Cuban Missile Crisis as meeting the criteria for vigilant surveying of alternatives, while Welch claims that it should have been coded as gross omissions because the advisors limited their "sustained scrutiny" to only two alternatives. Herek *et al.* (1989) note that Welch observes that "three broad alternatives quickly surfaced in the discussion and several variants of each were at least mentioned for consideration" (Welch, 1989, p 432) so that at least six alternatives were considered, thus passing Herek *et al.*'s criteria which does not require "sustained scrutiny" of all the alternatives. One alternative, only briefly considered, was issuing an inflexible ultimatum to the Soviet Union, an option which might precipitate nuclear war; Herek *et al.* argue that such options with "obvious crippling objections" (p 459) do not need sustained scrutiny for the decision-making to count as vigilant.

[xxii] It is not entirely clear whether these are offered as laws; do levels of stress (combined with personality factors) determine the coping strategy?

[xxiii] Janis and Mann list five, pruned to four in Wheeler and Janis, where unconflicted adherence and unconflicted change are merged into complacency. It is this latter list that is followed here.

[xxiv] Calling this a meta-emotive rule is this author's terminology

[xxv] The linking of the PreMortem to Janis' Special Procedures is this author's rather than Klein's.

[xxvi] Klein notes that some object the PreMortem is 'depressing' although he believes that it is an important corrective. It is close in its structure to Janis' Outcome Psychodrama which also involves generating a crisis in which everything that could go wrong has gone wrong, although this is primarily meant to enable decision-makers to identify further values (the assumption is that if it has gone wrong this implies something valuable has been lost, so what is this). Janis (1983) notes that outcome Psychodrama had mixed effects, seeming to enable those who had already carried out considerable research into possible career to identify further values, but for those early in the decision-making process without yet much information outcome psychodrama led to less vigilant decision making through discouraging participants about the possibility of finding a good career. This suggests that getting participants to vividly imagine things going wrong needs to be used with care. One possibility is to use De Bono's concepts, combining some optimistic yellow hat thinking with the black and red hat thinking of the Premortem (de Bono, 1985).

[xxvii] Janis and Mann distinguish between the Freudian preconscious and unconscious – emotions are preconscious and the decision maker is "capable of becoming at least partially aware of his feelings if someone induces him to scrutinize his thoughts and behavior" (1977, p 95), suggesting an important role for another in the process – but quite what does the scrutiny consist of?

[xxviii] see also the section on Nutt.

xxix For example see James (1890, chapter XXVI) and the phenomenology of oscillating to and for (quotation in the introduction to this chapter).

xxx Omer and Dar conducted a random controlled experiment in which stuck decision-makers carried out these activities (based on Alon (1985), de Shazer (1985) and Watzlawick et. al. (1974)) or activities drawn from Janis (appraising the challenge, information about the coping strategies, the balance sheet, planning implementation, and emotional inoculation). Both groups expressed satisfaction with the sessions and reduced their levels of indecision compared to a control group. Omer and Dar did not try combining the tasks.

xxxi This seems closely related to Janis' emphasis on identifying and challenging rationalizations.

xxxii In (2002) Nutt refers to a claim as starting the process in other texts (e.g. 2005) it is when a 'signal' is received. The terms seem inter-changeable.

xxxiii The 'arena of action' is equivalent to Kepner and Tregoe's scope or level.

xxxiv This is the issue of the level, scope (Kepner and Tregoe) or arena of action the decision is meant to encompass.

xxxv The terminology of 'right versus wrong' and 'right versus right' is not quite Nutt's, who uses very similar terminology, but taken from Kidder (2003) to illustrate Nutt's position.

xxxvi The number of alternatives is better conceptualised as a process outcome rather than a decision outcome as argued in the methodology section.

xxxvii Nutt provides the following justification of using a subjective estimate of value: "Objective indicators of value are preferred but hard to collect. Many of my informants declined to provide data about benefits, such as utilization or turnover. In addition, utilization, turnover, and related measures must be converted to a common metric, such as cost. Such conversions are argumentative, difficult to describe, and distract from the message. Bryson and Cullen (1984), Alexander (1986), and Hughes *et al.* (1986) offer a way to around these difficulties; their studies find that objective indicators are highly correlated with a well placed informant's subjective estimate of value. Many researchers who study decisions use subjective measures of value (Papadakis and Barwise, 1998)" (Nutt, 2008, p 437). The measure was derived through a estimate–discuss–estimate procedure where the informants first made initial independent estimates of value, discuss their estimates, and re-estimate – this procedure is used to improve recall and enable "the more compelling arguments to carry the most weight" (ibid, p 437).

xxxviii Nutt uses different terms in (2005) and (2008). (2005) uses 'initial adoption' and 'complete adoption' which are explained as: "Initial adoption indicates whether a decision was put to use when implementation was first attempted. The complete adoption measure adds ultimate adoptions and deletes ultimate rejections. Because partial adoptions are called failures, this indicator measures the extent of long-term use. To construct this measure, each participating organization was contacted two years after the first implementation attempt to identify changes in use" (2005, p 862-3). (2008) provides measures of 'sustained adoption' and 'completed adoption'

explaining these thus: "The 'sustained adoption' measure adds ultimate adoptions and deletes ultimate failures, measured two year later, to capture downstream changes in use. The 'complete adoption' measure treats a decision with partial use as a failure, indicating the extent of use" (2008, p 437). The text also refers to initial adoption to which no definition is provided. This author struggles to be certain what initial, sustained, completed, and ultimate adoption distinguish and when all these measures are made.

xxxix This can be compared with Janis when the first stage requires *accepting* the challenge

xl Keeney uses 'values' and 'objectives' interchangeably.

xli Limitations with this study include that there was no assessment of whether the different objective structures actually produced better outcomes for the students, and the second group of judging students were required to use the value hierarchies produced by an aggregate of the first group rather than their own values.

xlii See the account in chapter two of wise decision making. This is in accordance with popular wisdom that there are two ways of being unhappy – getting what you want and not getting what you want.

xliii It is one thing for events to occur and another for them to be perceived as significant. These events have to be interpreted and categorised as problems or opportunities. Once so interpreted they can be expressed as 'claims' (Toulmin, 1958; Nutt, 2002) about the nature of the decision-problem.

xliv The particular list of objectives obviously depends upon the type of decision. Janis and Mann (1977) provide a list of possible objectives for career decisions, Keeney (1980) for siteing energy facilities. Expertise has a valuable role in identifying the objectives that tend to apply to particular kinds of decisions.

xlv This is not the place to explore questions around the subjectivity or objectivity of values. Chapter two makes some brief comments about the justification of desires and values. The Hitler objection is perhaps the most telling against a pure subjectivist account of values (Singer, 1993; a more populist version of this objection was aimed at the values-clarification movement – see the section on Janis for references – with a car bumper sticker pointing out that Hitler clarified his values). Hitler could produce an objectives hierarchy using these methods, but few would wish to term such a hierarchy enlightened nor encourage decision makers to be successful in their decision making to realise these values.

xlvi A consequences table is what 'Which' reports use, where each alternative is assessed for how well it meets the objectives.

xlvii See the introduction to this chapter

xlviii These are the literatures this author is most conversant with – other literatures no doubt have their analysis of sources of error in human thinking, and related disputes.

xlix This analysis is guided by the account of wise decision-making developed in chapter two.

l This analysis draws on analysis in the career decision-making literature about indecisiveness, and some of the difficulties are framed in terms of vocational choice, but there seems no reason to believe that these sources of indecision cannot apply to any serious decision – Saka, Gati and Kelly share this view frequently referring to

general characteristics, and they draw upon wider psychological theory in identifying sources. They do note that further research is needed to determine how well these various difficulties distinguish between undecided and indecisive individuals. It is not obvious that all of these characteristics relate to causing indecisiveness – rather than being a manifestation of indecision.

[li] Alternatively – drawing upon the analysis of emotions in the next chapter – it is not necessarily lessening anxiety that is most important but rather responding appropriately to anxiety is what matters. Anxieties used correctly can point to areas that need investigating and motivate search.

[lii] Perhaps what is meant by low self-esteem is simply not thinking of oneself as worthy, in which case this is a definition rather than a causal explanation.

CHAPTER FOUR: The Nature of Emotions

Chapter Contents

1. The Complexity of Emotions

1.1 Kinds of emotion theory

Various emotion theories have been classified as a 'feeling', 'behaviourist', 'physiological', 'cognitive' theory and so forth. These theories tend to focus on a particular aspect of emotion, seek to show how this aspect can distinguish different emotions, and define this feature as the core of emotions. However, focusing only on one aspect of an emotion downplays the wide range of phenomena typical of emotions (e.g. de Sousa; 1990; Cornelius, 1996; Strongman, 2003; Prinz, 2004). The now predominant position is for theories to be "ambitious" (Strongman, 2003), recognising that emotions are complex, with multiple components (Evans, 2001; Moors, 2009).

1.2 The multiple components of emotions

Analysing the complex nature of emotions by example

The components of emotions can be approached by considering a vignette from everyday life:

> You hear news that the international pharmaceutical company for which you work is about to merge with another of roughly equal size and that there will be significant redundancies in the research and development department where you work. You have not been there for long, and so the redundancy cost of getting rid of you will be relatively low. Furthermore, you are aware that you have not had any notable research successes recently (taken from Goldie, 2000, p 46).

If you interpret this news as a threat to your well-being (how will you manage without income and a place in the world?), you will undergo physiological changes such as getting a dry mouth and increased heart rate. There will likely be changes to the tone of your voice, posture and facial expressions; you will experience unpleasant feelings, perhaps a cramping in the stomach and jitteriness; perhaps you will feel more uncertain about yourself and sense a precariousness to the world; your thoughts will easily turn to the fragility of your position and future; you will have a heightened awareness to, and search for, further information about your work situation,

accompanied by a desire to regain your sense of security, and perhaps you will increase in your efforts at work and start to cast your eye over other work possibilities. You are anxious.

This story suggests that emotions can be analysed as involving an appraisal, physiological changes, a feel, changes to how self and the world are thought about, and desires:

Table 31: Emotion Components

Component	Illustration
Appraisal of the situation and its implications for well-being:	"If you interpret this news as a threat to your well-being (how will you manage without income and a place in the world?)"
Physiological and bodily changes:	"you will undergo physiological changes such as getting a dry mouth and increased heart rate, there will likely be changes to the tone of your voice, posture and facial expressions"
Feelings/Phenomenology:	"you will experience unpleasant feelings, perhaps a cramping in the stomach and jitteriness, perhaps you will feel more uncertain about yourself and sense a precariousness to the world"
Cognitive changes:	"your thoughts will easily turn to the fragility of your position and future, you will have a heightened awareness to, and search for, further information about your work situation,"
Desires/Action Tendencies:	"accompanied by a desire to regain your sense of security, and perhaps you will increase in your efforts at work and start to cast your eye over other work possibilities"

There is still debate around whether particular components are necessary or sufficient for the presence of an emotion (Griffiths, 1997; Elster, 1999b; Russell 2003; Scherer 2005; Fridja 2007), the sequencing of components (Roseman and Craig, 2001; Moors, 2009), and whether particular components should be afforded priority in making sense of and defining emotions (Prinz, 2004; Moors, 2009).

A near definition of an emotion

Given the lack of agreed defining necessary and sufficient conditions this thesis will take a catholic view, adopting a 'range' definition (Wilson, 1963) of emotion, including a wide collection of phenomena within the meaning of the term without attempting a formal definition, specifying precise demarcation criteria. If a mental state includes most of the components identified above, and they are present to a reasonable degree, it will be considered an emotion. Thus some phenomena such as reflexes, and 'bare' feelings such as being cold or in pain, are excluded as they meet too few of the possible criteria, while moods can count as an emotion.

The case of doubt can caste light on the concept. Doubt can be either 'cold' or hot', depending upon whether what is doubted matters to the doubter (Thagard, 2004). Doubt can be cold and uninvolving, when it is about a belief that is trivial to the doubter on which nothing hangs – for example, following taking part in an inconsequential quiz, doubting whether Berlin is indeed the capital of Germany. Alternatively doubt can be hot, for example when, following an unexpected event, suddenly doubting that a plan upon which much hinges will succeed; this consists of an appraisal of significance of the event, triggering bodily changes and phenomenological experience, reorienting cognitive processes to investigate the source of the doubt (including triggering other emotions such as irritation, anger, anxiety, hope and so on), and leading to desires for reassurance or change. How hot the doubt is will, in part, depend upon the appraisal of what is at stake (i.e. how important the values and goals are and to what extent are they called into question). Given this doubt can range from cold, to lukewarm, to hot; the warmer the doubt the more readily it can be called an emotion.

The following sections analyse these components, although as these components interrelate there is some artificiality in these divisions, and some 'bleeding' from one section into another.

2. Appraisal

2.1 What is an appraisal?

Emotions as bound to cognition

Recent theories within both psychology and philosophy have drawn attention to the importance of cognition in emotions (e.g. Arnold, 1960; Solomon, 1977; Lazarus, 1991; Nussbaum, 2001; Roberts 2003; Ze'ev, 2000; see also Aristotle, 350 B.C.E./1980). Philosophers tend to talk about cognitions as the content defining the 'intentionality' of emotions (following Brentano, 1874/2003), psychologists as the 'appraisals' triggering emotions (following Arnold, 1960). Both of these accounts share the view that cognitions are 'bound to' emotions (Prinz, 2004). Different terms are used to express this role of cognition; for example, 'judgment' (Nussbaum 2001), 'construal' (Roberts 2003), 'engagement' (Solomon 2004) or 'appraisal' (Lazarus 1991)[i]. For convenience, as this term seems to be the most commonly adopted, 'appraisal' will be used.

Emotions are theorised to begin with an 'appraisal' of the environment as it impinges on goals and values. Lazarus writes that, "Emotions are first and foremost reactions to the fate of active goals in everyday encounters of living and in our lives overall" and that emotions appraise "harms and benefits, actual or potential, real or imagined" (Lazarus, 1991, p 92). Emotions have been called 'relevance detectors' (Fridja, 1986), or 'autoappraisers' (Ekman, 2003, 2004) "continually scanning the world around us, detecting when something important to our welfare, our survival, is happening" (Ekman, 2003, p 21). Oatley (1992) sees emotions as like alarms which go off when our goals are being frustrated, enabling us to re-orient our actions[ii]. Appraisals tend to be (but needn't be) automatic and nonconscious, sometimes occurring over a brief period of time.

Appraisal Dimensions

In understanding appraisals one research strategy is to seek a specific set of universal appraisal dimensions – a dimensional hyperspace - whose differential activation determines the particular emotion (e.g. Ellsworth and Smith, 1988; Lazarus, 1991; Roseman, 1991; Scherer, 2001). Typical dimensions suggested are whether the event is or is not perceived to be (a) motive-consistent or inconsistent, (b) certain or uncertain, and (c) caused by self, other or impersonal circumstances[iii]. For example anger is triggered "by appraising an event as a motive-inconsistent goal blockage caused by someone else and perceiving that one has the potential to do something about the situation. If the event were seen as motive-consistent (holding the other appraisals constant), affection rather than anger would be produced; if caused by the self, guilt would be felt" (Roseman and Smith, 2001, p 13). A person faced with the situation in the vignette above might feel relief rather than anxiety, if they hold a different value and goal structure about the job – perhaps the job is not valued and the person has already been considering leaving but didn't want to offend their boss.

Nussbaum, developing a neoStoic 'intentional' account of emotions, argues that emotions:
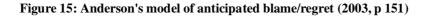
i)   are about something, an object

ii)   that this object is an 'intentional' object

iii)   that 'beliefs' about the 'intentional' object are often very complex

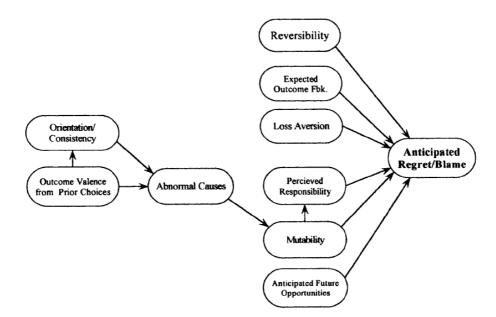iv)   including seeing the 'intentional' object as valuable

Nussbaum compares the account of emotion as having 'intentional objects' with an account that emotions are "unthinking movements" like gusts of wind. A difficulty for the unthinking movements account is that it cannot explain the 'aboutness' of emotions; fear is a fear of *something threatening impending*, guilt is guilt that *a moral boundary has been transgressed by me*. A "wind may hit against something, a current in the blood may pound against something: but they are not in the same way about the things they strike in their way" (2001, p 27).

The nature of the 'beliefs' about the intentional object is illustrated in Nussbaum's account of what must be believed in order to have fear: "I must believe bad events are impending; that they are not trivially but seriously bad; and that I am not entirely in control of warding them off"; and to have anger: "I must [believe] that some damage has occurred to me or to something or someone close to me; that the damage is not trivial but significant; that it was done by someone; probably, that it was done willingly" (Nussbaum, 2001, p 28-9[iv]).

An example: anticipated regret and blame

A frequent emotion that decision-makers can experience when contemplating choosing is anticipated regret or blame. These emotions can be seen as part of the anxiety family: its intentional objects are bad possible futures consisting of unpleasant personal experiences of regret and blame (feeling bad), and personally carrying out actions that are regretful and blameworthy (doing bad) (cf. Baumgartner, Pieters, and Bagozzi, 2008). The potential complexities of appraisal dimensions can be illustrated by Anderson's (2003) summary of research into this emotion:

Figure 15: Anderson's model of anticipated blame/regret (2003, p 151)

The appraisal dimensions of the emotion are explained below.

Table 32: The Appraisal Dimensions of Anticipated Regret and Blame

Dimension	Explanation
Reversibility:	Beliefs about whether the decision can be changed in the future.
Expected outcome feedback:	Beliefs about whether there will be information that provides a comparison point for how well a choice fares against other possible options
Loss aversion:	A tendency to weigh losses more heavily than equivalent gains against some arbitrary reference point (in accordance with Prospect Theory, (Kahneman and Tversky, 1979)).
Mutability:	The ease of constructing counterfactual alternatives to explain outcomes, which is influenced by what is considered normal or abnormal (it is easier to construct scenarios for the abnormal as they are not taken as givens), which is influenced by the outcomes from past decisions (if a past decision led to a bad outcome change is the normal, default option), and decision-makers' tendency to be active changers or passive acceptors of the status quo.
Perceived responsibility:	Beliefs about where responsibility for the choice will be believed to rest
Anticipated future opportunities:	Beliefs about whether there might be better future opportunities in choosing later

Prospective regret and guilt meet the components of an emotion identified earlier and can be placed within the emotion family of anxiety because of their shared 'core relational theme' (Lazarus, 1991). Anderson does not distinguish between prospective regret and guilt, but it is possible to distinguish different emotions – a possible distinction is that guilt is regret plus a sense that one should have chosen better perhaps through knowing better or being a better person (see also below for a cognitive elaboration explanation for how regret becomes inappropriate guilt).

Challenging universal appraisal dimensions

The focus on universal appraisal dimensions misses or downplays important aspects of emotions, which can be explained through cultural factors, an individual's personal narrative history, and levels of mood and arousal.

a) Cultural Factors
Emotions can be influenced by cultural factors, through:

i) The identification of emotions. Language communities may or may not have terms for universally experienced emotions. For example Evans (2001) claims to have experienced 'amae' as an adolescent when he joined a rock band but was only able to identify and label this emotion when he became aware of the Japanese concept. An emotion that can be conceptualised can be responded to in a way that an unconceptualised emotion cannot (Elster, 1999, calls emotions experienced without conceptualisation 'proto-emotions', compared to 'proper emotions').

ii) The triggering of emotions. If there are cross-cultural appraisal dimensions the content of these dimensions can be culturally influenced. For example if anger is triggered by offence what is offensive (and whether and how this offense is expressed) depends upon cultural factors (see Levenson's biocultural model, 1994, and its modification by Sripada and Stich, 2004).

iii) The modification and specification of emotions. While all cultures might have the 'same' emotion the nature of the emotion might be suffused with concepts peculiar to a particular culture. For example how love is understood and experienced might differ before and after reading Flaubert's <u>Madame Bovary</u> (Armstrong, 2003).

iv) The creation of new emotions. Some emotions, such as 'being a wild pig', might be unique to specific cultures (Averill and Nunley, 1992).

b) Personal narrative history

An individual's narrative history – their life events and the interpretative story they tell of their life (within the framework provided by their interpretative community) - influences the tendency to 'see' events in particular ways and hence experience certain emotional patterns, the significance of which in turn are interpreted leading to patterns of second, third and higher order emotions. For example a pattern of events comes to trigger anger, which triggers anxiety over the likely response of others to the anger, which triggers shame over being anxious about others response to the anger. Personal narrative history also plays a part in the triggering of 'slow burn' emotions - while anger might be triggered by a single occasion of goal interference and offence, hatred is likely to require a longer history of antagonistic conflict. Personal history also impacts how readily particular emotions are triggered, by resetting the activation threshold of the 'autoapprasiers' (Ekman, 2004; also see Nesse, 2005 for the 'smoke detector principle' and its adaptable setting level and cf. Zajonc, 2000, and the mere exposure effect).

c) Mood and arousal

A differential tendency to experience emotions can be explained by different moods and levels of arousal. Nowlis theorised moods as second-order dispositions that change the activation threshold of emotions; an individual in an irritable rather than relaxed mood is predisposed to experience anger (1963, cited in Evans, 2000; see also Siemer, 2009, who explains this as moods' tendency to elicit emotion-relevant appraisals). Zillmann demonstrated that physiological arousal (through physical exercise) can increase the likelihood of an aggressive response and anger facilitates subsequent sexual excitement and vice versa, through "arousal transfer" (Zillmann and Bryant, 1974; Zillman, 1983, cited in Fridja and Zeelenberg, 2001).

2.2 Levels of processing: How much inference does preference need?

Responding to the Lazarus- Zajonc debate

Following Zajonc's objection to appraisal theories that 'preferences need no inferences' (1980) it has become broadly accepted that some emotion experiences require only low-level 'superficial' processing – fear can result from certain objects looming into view (Parkinson and Manstead, 1992), and liking can result from mere exposure, perhaps through a form of classical conditioning where the unconditioned stimulus is the absence of aversive events (Zajonc, 2000).

What are thought of as high-level cognitive emotions can have low-level versions; Fessler has argued that shame can be triggered by nothing more than the perception of low relative social status (Griffiths, 2004; also see cognitive elaborations below). The emotional reactions Watson (1929, 1930 cited in Strongman, 2003) observed in babies of 'fear', 'rage' and 'love' seem to require only low level processing triggers: for 'fear' the sudden loss of support or sudden loud noises; for 'rage' hampering movements; and for 'love' gentle manipulation, especially of the erogenous zones.

Furthermore some emotions – phobic fears for example - are relatively impervious to conscious reappraisals suggesting more than one processing route with modular characteristics (Griffiths, 2004; see also LeDoux, 1996). There can be a timelag between appraisals and emotions – we can experience grief sometime after the initial appraisal of loss as it take time for the losses implications to hit home, and emotions whose appraisals are no longer 'fully' believed are still experienced (Nussbaum, 2001)[v].

2.3 The values and partiality of emotions

Emotions tied to Eudaimonia

Emotions, according to Nussbaum, see the intentional object as "invested with value or importance" relevant to the person's own goals and values (2001, p 30)[vi]. Nussbaum writes:

> The value perceived in the object appears to be of a particular sort. It appears to make reference to the person's own flourishing. The object of the emotion is seen as important for some role it plays in the person's own life. I do not go about fearing any and every catastrophe anywhere in the world, nor (so it seems) do I fear any and every catastrophe that I know to be bad in important ways. What inspires fear is the thought of damages impending that cut to the heart of my own cherished relationships and projects. What inspires grief is the death of someone beloved, someone who has been an important part of one's life (p 31).

Nussbaum is careful to point out that that does not mean that emotions are concerned with only the person's own satisfaction, rather with *eudaimonia* or flourishing, which can include, "Not only virtuous actions but also mutual relations of civic or personal love and friendship, in which the object is loved and benefitted for his or her own sake" (2001, p 32). Lazarus' similarly identifies emotions as triggered by the perception of 'ego-involvement', which has a broader as well as a self-interested focus. Types of ego-involvement are: self and social esteem, moral values, ego-ideals, meanings and ideas, other persons and their well-being, life goals (1991).

The partiality and limits of emotions' ethical consideration

Hume gave a crucial role to sympathy in our consideration of others but recognised that we naturally have greater concern for our own well-being and persons 'near and contiguous', to ourselves, with sympathy's strength much fainter for those remote to us (Hume, 1751[vii]), a claim consistent with the logic of the gene's point of view in evolutionary psychology. Starting from wishing others harm rather than good, Hopkins developed an evolutionary account of aggression-related emotions, with a similar pattern, explained in accordance with the following proverb:

> Myself against my brother
> My brother and I against my family
> My family against the clan
> My clan against the enemy
> (2004, p 225)

Even if others are not distant there are emotions that undermine our ethical consideration of others. We are capable of feeling disgust and hatred for those with whom we have close contact and these emotions can shut off ethical consideration (Glover, 1999; Nussbaum, 2004). Emotions of self-hatred and self-disgust can similarly undermine consideration of the individual's own interest (Nathanson, 1994).

2.4 The obscurity of emotions

Do we know our emotions?

For LeDoux, "emotions are notoriously difficult to verbalise. They operate in some psychic and neural space that is not readily accessed from consciousness. Psychiatrists' and psychologists' offices are kept packed for this very reason" (1996, p 71). Oatley suggests that "many of our actions hover on a borderline between the voluntary and the involuntary" (1992, p 34) in which we are fully conscious of neither the goals we are seeking, nor the plan we are enacting for realising them. This is illustrated in Oately's analysis of Tolstoy's <u>Anna Karenin</u>.

The example of Anna Karenina

In the story, Anna, stuck in a soulless marriage, has travelled to Moscow to meet her brother with the conscious intention to help him repair his marriage. At the station, she chances to encounter Vronsky, a cavalryman who enjoys many romantic dalliances, and who later becomes her lover. A railway man is killed when the train pulls into the station and, after Anna asks whether nothing can be done to help, Vronsky leaves two hundred roubles for the man's widow. As she is leaving the railway Anna's lips tremble and she has difficulty keeping back tears. Anna later tells her sister-in-law, Kitty, about the meeting with Vronsky, but omits to mention the two hundred roubles. Tolstoy tells us "she did not like to think about them. She felt that there had been something in it relating personally to her that should not have been." Anna is left with a "disagreeable feeling" about the incident (p73, cited p 38). While Anna ostensibly and consciously came to Moscow to help her brother's troubled marriage, Oatley wonders whether she was also visiting with a vague idea of respite and the possibility of an adventure from her own deadening married life. As readers we are not sure and Anna "if she could have been asked, … may not have been sure" (*ibid*, p 38).

3. Physiological and bodily changes

Introduction

Emotions are connected with processes in the brain, and changes throughout bodily systems - "the musculo-skeletal and visceral systems…[and the] internal milieu… [of] the multifarious patterns of chemistries continuously realized in the blood stream and the intercellular spaces" (Damasio, 2004). An as yet unfulfilled research agenda is to match specific brain and body changes with specific emotions. Emotions are correlated with changes in vocal expression (Johnstone, van Reekum and Scherer, 2001) and facial expressions (Ekman, 2003; but see also Russell and Fernandez-Dols 1997), although not all emotions produce changes and it is possible to modify these expressions to some extent, for example when cultural 'display rules' dictate or for more Machiavellian purposes (Scherer, 1985, cited in Johnstone, van Reekum and Scherer, 2001; Ekman, 2003; Griffiths, 2004).

The relation of the body to emotions can be analysed through exploring some of the standard emotion theories, and their strengths and limitations.

3.1 James' theory

On the standard interpretation of James' theory it is bodily changes rather than appraisals that trigger (or perhaps are) emotions - because we run we feel fear, rather than we run because we feel fear (1884; but see Ellsworth, 1994, and Reisenzein, Meyer, and Schutzwohl, 1995). This account leaves unclear why perception alone would motivate us to run in the first place (Arnold, 1960) and why emotions have intentional content (Somolon, 1976). Following Cannon's influential critique (1927) just what counts as a bodily change and whether it is possible to experience emotions without bodily changes is an ongoing debate (e.g. Damasio, 2004; Moors, 2009).
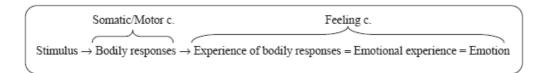
Figure 16: The order of components in James' theory (standard view)[viii]

3.2 Schachter's theory

James' account was modified by Schachter and Singer (1962/2003) to the position that emotions follow our interpretations of the significance of undifferentiated physiological arousal. The original experimental manipulation in which arousal was created through injections of adrenaline and interpreted as joy or anger depending upon the situation determinants of others behaviour has not been easily replicated (Reisenzein, 1983; Schorr, 2001). More generally Schachter has been criticised for basing a general theory on an atypical situation of induced and undifferentiated physiological changes (Scherer, 2001). Nevertheless it is certainly the case, as those who practice meditation can testify, that changes to levels of physiological arousal can modify our experienced emotions and our propensity to experience emotions (Evans, 2001; see also Zillmann and Bryant, 1984).
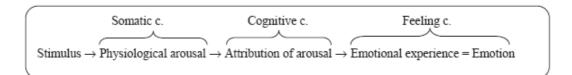

Figure 17: The order of components in Schacter's theory
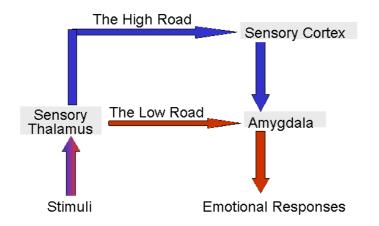
3.3 James' theory revised

A more subtle interpretation of James (Evans, 2001; Chwalisz, Diener, and Gallager, 1988) is to combine an appraisal account with a view that the body can act as a 'sounding board' amplifying emotions, when we 'work ourselves up' into an emotional 'state':

> Everyone knows how panic is induced by flight, and how giving way to the symptoms of grief increases those passions themselves. Each fit of sobbing makes the sorrow more acute, and calls forth another fit stronger still, until at

last repose ensues only with lassitude and with the apparent exhaustion of the machinery (James, 1882; cited in Evans, 2001)

3.4 LeDoux's theory

Based on fear-conditioning, lesion research on rats LeDoux developed a neurophysiological underpinning for the claim that emotions have low and high processing levels (1996). The low processing route takes sensory information from the visual or auditory thalamus to the amygdala which activates the fear response, leading to physiological changes such as increased heart rate, higher blood pressure, interpreted as a biological preparedness to respond to threat. It is this fast-track path that produces the rapid fear response experienced when a walker in the wood hears a sharp sound, freezes and becomes hyper-alert. The (comparatively) slow-track response goes via the cortex for fuller processing with the processed information relayed onto the amydgala. It is this processing that tells the walker it was just the snapping of a twig produced by fellow ramblers and switches off the fear response. These two routes are considered to have different functions, with an evolutionary explanation in terms of a predisposition to quick response to potential threat. While the "quick and dirty processing system" cannot tell the amydgala "exactly what is there" it is "biased toward evoking response", while "the cortex's job is to prevent the inappropriate response rather than produce the appropriate one" (LeDoux, 1996, p 163- 165).

LeDoux: Tracing Emotional Pathways (NY Times Nov. 5, 1996)

Figure 18: Low and High Roads to the Amygdala (based on LeDoux, 1996, p 164)

Goldie compares the case of anxiety about losing a job outlined above, with the fear experienced of seeing a bus approaching (2000). In both cases it is theoretically possible to give a belief/desire explanation consistent with more extensive cognitive processing. In the bus case you 'believe' the bus is going to run you over and you 'desire' to avoid this. However in the bus case this is a short-circuit response and beliefs and desires do not explain your action as "they come too late for that" (2000, p 46). The fear is reappraised once the longer processing route 'catches up'. After leaping to one side to escape being run over, the actor sheepishly realises the bus is stopping, and the fear 'jumped to conclusions'. While still shaken, as physiology has yet to calm down, the actor is no longer fearful.

4. Feelings and Phenomenology

4.1 Emotions from the 'inside'

Folk theory has it that emotions are the experience of a feeling, and it seems hard to doubt that a central component to an emotion is what it is like to experience the emotion from the inside. It is undoubtedly true that there is (often), to use Nagel's phrase, 'something it is like' to experience an emotion (Nagel, 1974). The nature and significance of this experience can be understood through an analysis of different theories that have focused on this component.

4.2 Russell's circumplex model

Theoretically feeling has been conceived as a combination of level of activation/arousal and pleasure (Russell, 1980; Barrett and Russell, 1999; Russell, 2003); for example sad has a low level of activation and feels bad, while delighted has a high level of activation and feels good.
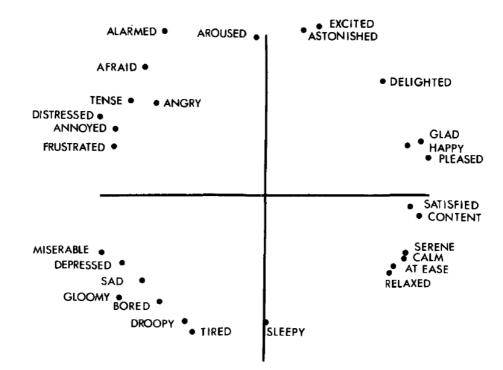

Figure 19: Russell's Circumplex Model (1980, p 1168)

Solomon (2007) questions whether all emotions can be divided into those that feel good or those that feel bad. Anger feels bad when you contemplate the wrong suffered but can feel good as you focus on getting even or righting the wrong and nostalgia, as a mixture of sadness and consoling memories, seems to feel both good and bad.

4.3 Bodily states and feelings

One version of the feeling theory is to see feelings as linked to bodily states, the 'somatic feeling theory' (Prinz, 2004); the feeling of a heart racing is what elation feels like, blushing is what embarassment feels like. James (1884) challenged readers to imagine feeling an emotion by systematically subtracting the feeling of bodily states believing that without these nothing is left of emotion experience. Others, sympathetic to role of the body in emotional experience, have seen no contradiction in the view that emotions need not be consciously felt (Damasio, 1994; see also Lambie and Marcel, 2002; Ruys and Stapel, 2008).

Goldie (2000) combines aspects of James' analysis that emotions are connected to our bodies with the view that emotions possess intentionality; we experience bodily 'feeling towards' aspects of the world, as illustrated in this analysis of grief:

> Of a grieving person feeling a pang in the breastbone, we want to say that the
> pang is a pang for the one who is being grieved over; although it is
> undoubtedly a feeling of something bodily, and can be pointed to as in the
> chestbone, what makes it a pang of grief, rather than any old pang in the
> breastbone, is surely that it has been, as James says, 'combined in
> consciousness' with the object of the emotion (Goldie, 2000, p 55)

4.4 Feelings and intentionality

Emotional feelings are not just experiences (such as a toothache) but are directed at the world. Russell provides the following phenomenological description:

> As people scan their surroundings, they do not find a jumble of stimulation,
> patches of light, and bursts of sound. Instead, they typically find a coherent
> pattern of meaningful objects and events in a stable environment. Someone

enters a pub and observes a friend sitting there—or, more precisely, a rousing pub and a boring friend sitting calmly. Objects, events, and places (real, imagined, remembered, or anticipated) enter consciousness affectively interpreted (Russell, 2003, p 149; see also Zajonc, 1980).

While it might be possible to characterise these affective interpretations – 'rousing' and 'boring' - solely in terms of the two dimensions of pleasure and arousal, the world is seen construed emotionally or to use Heidegger's terms through 'moods' that 'attune' us to the world drawing attention to aspects of the world and its possibilities for the individual's 'life-world'; thus events are seen as threatening or benign, people offensive or lovable, actions regrettable or joyful. As Guignon writes, "To be human is to be situated in a worldly context…In our normal, everyday situations…we find ourselves caught up in the swim, handling equipment in order to realize particular aims and goals…Our goals, interests, and needs structure the ways in which things will count for us in the context. The wary shopper, for instance, encounters a supermarket where the bargains stand out and the over-priced junk recedes" (Guignon 2003 p 183).

This consciousness of the world need not include a reflexive consciousness that that is how one is perceiving the world. The shopper need not be reflexively aware that they are wary, nor even that particular aspects of the world stand out to them, unless, for example, their attention is drawn to their patterns of attention (Husserl,1950/1977; Sartre, 1939/1997).

4.5 The role of focus of attention

Lambie's patterns of attention

Lambie (2009, based on Lambie and Marcel 2002) draws attention to the different forms that emotional experience can take depending on patterns of attention; for example, an angry person might:

> experience an urge to attack, or thoughts of how unjustly he has been treated; he may perceive someone as "a bastard"; he may be aware of a "feeling of anger," or be aware that he is in a state of anger; or he may experience a combination of these contents (Lambie, p 272)

The range of different experiences can be classified in terms of:

    (a) focus on:

        (i) self or the world

        (ii) evaluation or action

    (b) modes of attention as:

        (i) analytic or synthetic

        (ii) immersed or detached

These can be illustrated through examples:

Focus of attention:

(ai) For focus on the *self* the emphasis is "I am offended (by X)",

    For focus on the *world* the emphasis is "X is offending me".

(aii) For focus on *evaluation* the emphasis is:

        what is the *world* like ("X is a bastard") or

        what is the *self* like ("I hate X").

   For focus on *action* the emphasis is:

        what actions does the *world* call upon me to make (X-to-be-attacked) or

        what urges am I (*self*) experiencing (my urge to attack).

Mode of experience:

(bi) the *mode of experience* is

    analytic if attention is on the components/fine details (my heartbeat, the stupid grin of the person to be attacked), or

    synthetic if on the higher level categories (my anger)

(bii) the *mode of experience* is

    immersed if there is no sense of being an observer of self or the world, or

    detached if a subject-object distinction is experienced.

A final type of distinction is between 1st order and 2nd order experience. While 2nd order experience is more articulated (although not necessarily propositional in form) 1st order experience is an experience of 'spatial dynamics': "When self-focused, … consists in an experience of "bodily physicality," that is, one experiences one's whole body in relation to the space around it (e.g., as compressed, or about to be overwhelmed, or heavy, or buoyant, or enhanced, or diminished). When world-focused, first-order emotion experience consists of a kind of "path space" or "hodological space" (Lewin, 1938), that is, of the perception of paths in one's phenomenal world that are open or closed, to-be-taken, or not-to-be-taken" (Lambie, 2009, p 273).

Figure 20: Lambie (2009, p 273)

Table 1. Illustration of the varieties of content of anger experience according to different levels of consciousness (1st & 2nd-order) and variations in mode (analytic-synthetic) and foci (world/self; evaluation/action) of attention (based on Lambie & Marcel, 2002)

| Level | Evaluation | | Action | |
	World	Self	World	Self
1st-order	*Hodological space* Impeding, compressing	*Bodily physicality* Impeded, compressed	*Hodological space* Requiring force to remove blocking agent	*Bodily physicality* Ready to push out
2nd-order	*Propositional awareness: Thoughts*		*Non-propositional awareness: Figural objects*	
analytic	X is stopping (my action Y)	I am stopped from doing Y (by X)	———	My heartbeat, my tenseness, etc. (bodily sensations)
moderately synthetic	X is offending (me) X is a bastard	I am offended (by X) I hate (X)	X-to-be-attacked (Gerundival Perception)	My urge to attack (action urge)
highly synthetic (categorical)	———	I am angry	———	My anger

5. Cognitive changes

5.1 The reorientation of the cognitive systems

Once emotions are triggered they can change how the cognitive system processes information, redirecting attention, setting up biases of cognitive processing by narrowing attention and constraining interpretation, changing value priorities so that goals that are threatened by the triggering event are given priority, making ready mechanisms of action and bodily resources, and often making the event that caused the emotion salient in consciousness (Easterbrook, 1959; Oatley and Johnson-Laird, 1985; Oatley, 1992, 2009; Cosmides and Tooby, 1990, 2000; Haselton and Katelaar, 2005; cf. Frederickson's account of positive emotions, 1998).

5.2 The tendencies of moods and emotions

Aristotle (1991/ca. 350 B.C.E.) advised that a key to convincing others was to first elicit the appropriate emotional state in them. Similarly Spinoza defined emotions as "states that make the mind more inclined to think one thing rather than another" (Spinoza, 1677/1989, cited in Fridja, Manstead and Bem, 2000).

Mood congruent memory

Different analyses of this relationship have been offered. At perhaps the simplest level a tendency to recall information that is mood congruent (Bower, 1981) influences subsequent judgements by providing a subset of the information biased by what is readily available. For example someone who is sad is more likely to access information 'tagged' in memory stores as sad, leading to a general negative view of self and circumstances and a potentially depressive downward spiral.

Mood and the information heuristic

General mood might also influence appraisals through the mood-as-information heuristic when people appraise the significance of events by asking themselves how they feel about something (Schwarz and Clore (1983). These rather general mood-based appraisals of good

and bad can be off-kilter when moods are misattributed – for example people asked to judge their overall quality of their life on a sunny rather than grey day rate it higher unless their attention is first drawn to the weather.

Mood and processing strategies

More subtly yet moods might influence appraisals of whether situations require careful investigation. The weight of findings suggest that people in good moods tend to engage in less careful processing than those in bad moods, perhaps because those in bad moods are either motivated to try and find a solution to whatever is making them feel bad or because they interpret the bad mood as carrying the informational content that there is something wrong that needs careful attention to fix. Good moods on the other hand carry no incentive to seek change and can be interpreted as implying everything is fine (Schwarz & Clore, 1996).

Distinguishing the appraisal tendencies of emotions

The view that all good moods and all bad moods are alike in their appraisal tendencies has more recently been challenged. Tiedens and Linton (2001) have argued that it is the appraisal of certainty or uncertainty within emotions that influences the level of information processing that tends to be subsequently used. Anger is an emotion that feels bad (and hence can be seen as contributing to a bad mood) but carries with it appraisals of certainty – those who are angry rarely have doubts about the justifiability of their anger and hence tend to engage in little checking of the epistemic reliability of their emotion.

This perspective has been developed by Lerner and Keltner who propose that "each emotion is defined by a tendency to perceive new events and objects in ways that are consistent with the original cognitive-appraisal dimensions of that emotion" - emotions have emotion-specific 'carry-over' effects (2000, p 473; cf. Siemer's dispositional theory of moods, 2009).

This theory has received empirical validation in terms of risk perception; for example in connection to perceived threat after the September 11 bombings people who were afraid made

more pessimistic judgments of the likelihood of negative future events, whereas people who were angry were more optimistic about future events (Fischhoff, Gonzalez, Lerner and Small, 2005). Drawing on appraisal theory this difference is perhaps explained by differing appraisals of control in these emotions, and hence resultant interpretations - if we are afraid we judge ourselves to be at the mercy of an unpredictable world, if angry able to master the world.

The carry-over effects of emotions can change how much something is valued as well as the understanding of situations. Participants first placed by an emotional manipulation into a disgusted or sad state were then willing to accept less money in order to sell possessions than those in a neutral emotional state, but only those who were sad were willing to pay more to buy. The explanation offered is that disgust appraises an object or idea as indigestible with the desire to expel the object, while sadness is based on an appraisal of loss and hopelessness with the desire to change situations - an interpretation consistent with the shopping behaviour of those who are depressed (Lerner, Small and Loewenstein, 2004). These tendencies change value priorities – in disgust both what is currently close to one and could be close are disvalued, while in sadness what one currently has is disvalued, while new possibilities are more highly valued.

Table 33: Appraisal Tendencies

	Appraisal	**Appraisal tendency**
Disgust:	too close to an indigestible substance or idea	expel – sell or don't buy
Sadness :	Helplessness and loss	change circumstances – sell or buy

5.3 The cognitive elaborations of emotions

Frijda's account of low-level emotions mistaken as high-level

Frijda argues that emotions triggered through low-level processing can through 'cognitive elaboration' come to resemble the higher-level emotions (1993; Parkinson, 2001). Although appraisal theorists have tended to theorise anger as involving a judgment of blame, diary studies suggest that simple frustrations, such as a car not starting, or an unexpected pain can trigger anger, to which blame then attaches with a consequent tendency to particular patterns of action (e.g. Hall 1899; cited in Frijda, 1993). Hall provides the story of a man who hurt himself on a large rock which he then 'punished' by carrying a considerable distance and throwing into a river. Leaders with the resources can go to further extremes. Seneca tells the story of Cyrus the king of Persia whose beautiful white horse was drowned by the rapid current when crossing the river Ganges on the way to war with the Assyrians. The angry Cyrus 'punished' the river by having his army spend the whole summer diverting the river into 360 small canals to make it so weak "that a woman …[could] cross it without so much as wetting her knees" (De Botton, 2000, p 101).

Similarly guilt is generally supposed by appraisal theorists to include the appraisal of a blameworthy act by the self. Kroon (1988, cited by Fridja, 1991) asked participants to identify experiences they felt guilty about and to describe the precise circumstances and their relationship to victim. Although 90% said the harm they had inflicted was serious or very serious, 59% said they felt themselves to be the cause while they knew it was someone else.

Table 34: Fridja's (1993) theory of cognitive elaboration

	Eliciting conditions (simple)	**Cognitive elaboration**
Anger:	Sudden, unexpected pain, goal interference, acute frustration	Evil-doing responsible agent
Guilt:	Cause harm unintentionally, with risk of loss of love	Own responsibility and blameworthiness

Fridja provides an explanation of cognitive elaboration in terms of 'action tendencies'; emotions are designed to accomplish actions, so the cognitive changes are in the service of this. As anger "involves the action readiness to remove an obstacle or a wrong, attributions can be understood as efforts to identify a responsible agent at which the actual removal efforts may be directed" (1993, p 371). As guilt involves the urge to undo a harm or forestall loss of love beliefs formed for identifying possible causes of loss of love, which may make undoing or forestalling possible[ix].

Agreement from Aristotle and Nussbaum

Others have noticed a similar tendency in emotions; Aristotle wrote of anger that it "seems to listen to argument to some extent, but to mishear it, as do hasty servants who run out before they have heard the whole of what one says, and then muddle the order, or as dogs bark if there is but a knock at the door, before looking to see if it is a friend" (Aristotle, 350 B.C.E./1980, Book VII, section 6). Similarly Nussbaum's analysis of her grief when her mother died included feeling anger and guilt experienced despite her acknowledgement that the judgments within them were hasty and mistaken:

> I felt, again, anger – at the nurses for not prolonging her life until I arrived, although I knew that they were following her written instructions not to take "extraordinary measures"; at the doctors for letting a routine operation lead to catastrophe, although I had no reason to suspect malpractice; at the people who phoned on business as if everything were normal, even though I knew they had no way of knowing otherwise…Above all, I felt anger at myself for not being with her on account of my busy career….I blamed myself…for all the inattentiveness and the anger and all the deficiencies in love that I could find in my history with her, and some that I may possibly have invented (2001, p 21)

5.4 The distortions and transformations of emotions

Emotions and self- protection

The capacity for emotions to reveal to us about how we are doing in the world is a double-edged sword. What if how we are doing is not so good? A line of thought from Nietzsche, through Sartre to Solomon and Elster is to theorise emotions as self-protective mechanisms that distort how we interpret the world and what we value.

a) Nietzsche and ressentiment

Nietzsche, in On the Genealogy of Morality divides men into the strong and the weak. According to Nietzsche's account morality originates in the weak inverting the value judgments of the strong through the transformative power of 'ressentiment' [x]. Ressentiment is experienced when a state of affairs, which a person is powerless to alter through acting on the world, is perceived to be unpleasant. As the path of action is blocked the weak invert the values of the strong:

> the poor, powerless, lowly are good; the suffering, deprived, sick, ugly are also the only pious… - whereas you, you noble and powerful ones, you are in all eternity the evil…(1887/1994, Treatise 1, sect 7, pp. 16-17.)

b) Sartre and Solomon on magical transformations

Sartre (1997, p 230-1) retells Aesop's fable of the fox who perceives grapes as "having to be picked" but, on finding them out of reach, re-describes them as too green - sour. This is a re-description of the situation, a 'magical transformation' of the appearance of the grapes from 'having to be picked' to 'too green'[xi]. In this case the desirability of sweet grapes is kept constant, it is just that *these* grapes are too green to be sweet. An alternative pattern of distortion is to continue to see the grapes as sweet but to deny that what was really wanted was sweet grapes – a distortion of values rather than the world.

Solomon (1993) has developed this Sartrean theme with the thesis that emotions' magical transformations seek to protect our self-esteem. Basil Fawlty hitting a car which will not start

with a bush is a way of transforming the situation from one in which he was to blame (for not getting the car serviced) into one where the car was at fault.

These emotional transformations can also enable us to even the score:

> I may identify the object of my anger as John's having stolen my car, but I am really angry at him for writing a harsh review of my book (Solomon, 2003, p 7)

and get our way:

> Joanie wants to go to a party; her husband does not. She begins to act bored and frustrated; he watches television. She resigns herself to reading; sighing occasionally. He asks her if she has picked up some shirts from the laundry; she says "no." He flies into a rage. He needs shorts (he has hundreds). He needs one of *those* (they are all the same). She is negligent (she was busy). She takes advantage of him (she stays with him). Naturally, she rebels, but she is upset, with mixed guilt and anger. She thinks him unreasonable, impossible, and slightly neurotic. Their encounter is short-lived. She goes off to bed; he settles back before the television. The party is out of the question (Solomon, 2003, p 12).

The Machiavellian appraisals of emotions

Griffiths makes a similar analysis of 'strategic' or Machiavellian appraisals of emotions when he writes "Organisms may be evaluating not just the significance of what has happened, but also the likely outcome of responding to that occurrence with one emotion or another" (2004, p 100). As with other dimensions on appraisal theory this evaluation can be non-conscious, so individuals themselves need not understand the strategies of their emotions. Averill's (1980) analysis of emotions as 'disclaimed actions' also appeals to the strategic nature of emotions (see also Parkinson, 2001). Cyrus chose to cross the river Ganges despite advice from his generals, so perhaps it was his own responsibility for the death of his horse that partly fuelled his anger against the river. A similar - perhaps intended and certainly more benevolent - strategy is employed by flight attendants in reinterpreting the actions of passengers to manage their own emotions and the emotions of their passengers (Hochschild, 1983).

Emotions as self-justifying

As Goldie points out emotions tend to look for their own evidence (2000), an aid to emotional distortions. Joanie's husband, reluctant to go to the party, becomes angry to avoid having to go, and his anger looks around for evidence for its support. While he is in this state of anger he is unlikely to be open to considering counter-evidence, rather his emotion will seek to defend its justifiability. Seneca not only believed that anger sweeps aside reason, but that it distorts the process of reasoning. The angry man has to represent to himself, as well as others, that he is motivated by a just cause, and to do this he has to twist reasoning to fit anger's demands (Elster, 2004, p 32). This process is amplified as appraisals trigger emotions that influences perception which in turn trigger emotions:

> …emotions and appraisals have a recursive relationship, each making the other more likely. For example, the more anger one feels, the more one perceives others as responsible for a negative event: and the more one perceives others as responsible for a negative event, the more anger one feels (Lerner, Tiedens, and Gonzalez, 2006, p 118).

Elster's account of emotional transformation

Elster (1991) offers the following model of how emotions can transform and distort our understanding to protect our self-esteem. Noting that someone has something that we want we may experience envy. Reflecting upon our envy we might conclude that the other person has something that we want because they are more deserving, having worked harder or being more gifted. Such a comparative assessment can change our view of ourselves so that we feel shame or guilt over our relative failure. To protect ourselves from this shame we need to change our original assessment. No longer do we think that the other has something we want because they are more worthy than us. Rather we come think that they must have acquired the desired good by immoral means. Given this revised assessment we can now feel moral indignation. Our self-esteem is protected by translating shame about ourselves into indignation at the immorality of others, and the pain of envy is countered by the pleasures of revelling in our own moral superiority.
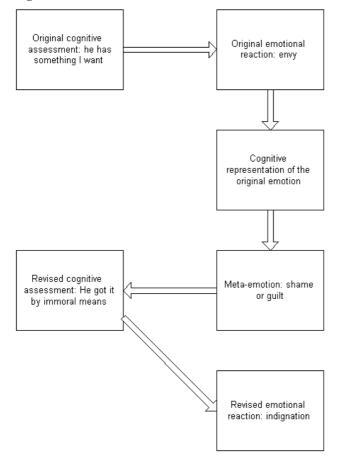
Figure 21: Emotional Transformation (based on Elster 1991, p 99)

```
┌──────────────────────┐          ┌──────────────────────┐
│ Original cognitive   │          │ Original emotional   │
│ assessment: he has   │════════▶ │ reaction: envy       │
│ something I want     │          │                      │
└──────────────────────┘          └──────────────────────┘
                                             ║
                                             ▼
                                  ┌──────────────────────┐
                                  │ Cognitive            │
                                  │ representation of the│
                                  │ original emotion     │
                                  └──────────────────────┘
                                             ║
                                             ▼
┌──────────────────────┐          ┌──────────────────────┐
│ Revised cognitive    │          │ Meta-emotion: shame  │
│ assessment: He got it│ ◀════════│ or guilt             │
│ by immoral means     │          │                      │
└──────────────────────┘          └──────────────────────┘
            ║
            ▼
                    ┌──────────────────────┐
                    │ Revised emotional    │
                    │ reaction: indignation│
                    └──────────────────────┘
```

This distorting influence of self-justification can be a consequence of acting according to Janis' Emotive Rules (1987), where, to protect self-esteem and feel validated (Hart, Eagly, Lindberg, Albarracin, Brechan and Merrill, 2009), decision-makers might try to justify to themselves the wisdom of acting from frustration, anger or reactive elation, leading to further distortions of our understanding of our situation, reducing the likelihood we might reconsider a rash decision, and in the process valuing 'being right' above all else.

6. Desires/Action Tendencies

6.1 Aristotle on the desires and Fridja on the action tendencies of emotions

Aristotle defined anger as 'a desire, accompanied by pain, for a perceived revenge, on account of a perceived slight on the part of people who are not fit to slight one or one's own" (ca. 350 B.C.E./1991, 2.2, 1378c31-33). This definition includes two of the components of an emotion analysed so far, an appraisal (of being slighted by one not fit to slight us), and a feeling (pain), as well as a third component, the desire for revenge. The additional component, a desire to act, fits common experience and many accounts of emotions (e.g. Lyons calls these desires (1980), Fridja action tendencies (1986)). Different emotions are theorised to urge acting according to particular patterns: "Anger… creates the urge to attack, fear the urge to escape, disgust the urge to expel, guilt the urge to make amends, and so on" (Frederickson, 1998, p 302). These urges are often accompanied by physiological changes appropriate to the action tendency – for example fear is accompanied by increased blood flow to the large muscle groups which enable running (Levenson, 1992).

6.2 Roseman's approach and avoidance emotivational goals

Roseman's account

Roseman notes that the action tendencies of particular emotions have specific 'emotivational goals' and analyses these goals in terms of very general approach and avoidance motivations (Roseman, 2001, 2008). For example: fear prepares to move away from, or stop moving towards; sadness to stop moving towards; frustration to move against it; disgust to move it away from you; love to move towards; and anger to move against other. It is the general nature of these goals that provide some flexibility as there are multiple roots to their fulfilment. For example fear can motivate "freezing hiding, felling, calling for help, and defensive aggression …[which] move the person away from danger and towards safety"; anger can motivate a variety of behaviours intended to hurt someone such as "hitting criticising, taunting, thwarting, giving the silent treatment" (Roseman, 2008, p347).

There is debate over whether some positive emotions - hope, joy and relief – have an emotivational goal. Frederickson (1998), drawing on Fridja's concept of an 'action mode' (Fridja, 1986), postulates that positive emotions, triggered by appraisals of a safe environment, don't have specific action tendencies or emotivational goals except to broaden the "thought-action repertoire"; joy produces the urge to play, interest to attend to and explore and contentment "prompts individuals to savor their circumstances and recent successes, experience "oneness" with the world around them, and integrate recent events and achievements into their overall self-concept and world view" (Frederickson, 1998, p 306).

Emotional conflict through multiple emotivational goals (Plato's account reanalysed)

Emotions can generate conflicting desires when the emotivational goal of one emotion conflicts with the emotivational goal of another, as illustrated in Plato's account of internal conflict:

> Leontius, the son of Aglaion, coming up one day from the Piraeus, under the north wall on the outside, observed some dead bodies lying on the ground at the place of execution. He felt a desire to see them, and also a dread and abhorrence of them; for a time he struggled and covered his eyes, but at length the desire got the better of him; and forcing them open, he ran up to the dead bodies, saying, Look, ye wretches, take your fill of the fair sight (Plato, 360 B.C.E, 5.iv).

According to Plato's Socrates, "The moral of the tale is, that anger at times goes to war with desire, as though they were two distinct things", but more plausibly in this case it is the desires and emotivational goals of curiosity and disgust that are in conflict, as curiosity is urging approaching a source of disgust (with anger expressing self-disapproval at giving in to the desires of curiosity[xii]). This example shows that the desires of an emotion can also conflict with an agent's more considered values, often with this involving an appraisal by a self-evaluative emotion. An example, more in accordance with contemporary sensibilities, is experiencing conflict between a desire to pull away when repulsed by the sight of someone with a severe physical deformity and being drawn to 'stare', and feeling ashamed or embarrassed at both tendencies.

6.3 The question of universality

Aristotle on anger

To what extent though are the desires of emotions universal? Aristotle's account of anger as including a desire for revenge against one who is not worthy to slight one is perhaps more a reflection of the value judgments of an hierarchical and agonistic ancient Greek society about the correct response to an offence, rather than a universal characteristic of anger's desires.

Averill on anger

Modern day participants provided self report data on both the impulses they felt and the actions they took when the experienced anger (Averill, 1983). Anger was experienced as having a wide range of different impulses – with impulses not always acted upon. The respondents felt like aggressing verbally in 82%, physically in 40%, or to talk things over in 59% of the episodes. For actions the most frequent responses were nonaggressive: calming activities (60%) and talking the incident over with the instigator (59%). Direct physical aggression was very rare (10%); more common were verbal or symbolic aggression (49%), and passive aggression - the denial or removal of some benefit (41%).

This data questions whether Roseman's emotivational goals are sufficiently open-ended - perhaps anger does not motivate everyone to 'move against other', although it might be that this was only after reflection on the appropriateness of moving against. Similarly guilt can motivate making amends with those believed to have been transgressed against, an action perhaps better classified as moving towards others, although it can also motivate self-punishment as an alternative way of righting the scales, more accurately classified as moving against self.

There is some reason to doubt the data in Averill's self-report studies. As well as the general problem of introspection and self-interpretation these responses might themselves have been 'doctored' by value judgements about emotions – guilt and shame might have motivated Averill's respondents to misreport anger's urges. That this could be the case suggests a further

feature of emotions – that the desires of emotions can be perceived as poor guides, prompting to unwanted action. Even Aristotle might wonder whether the desire to seek revenge against those who were unworthy to slight one was always an expression of the 'mean' (Aristotle, 350 B.C.E./1980).

6.4 Desires to action and reflection

Some emotions urge action, others to reflection on the past or present and future

Emotions can be distinguished in terms of whether they urge to action or to reflection. Baumeister, DeWall, Vohs and Zhang (2007) note that if fear is taken as the paradigmatic emotion it seems that emotions are preparing for and urging to action, but focusing on different emotions provides a different picture:

> A person performs behaviour that causes distress to a friend. The person therefore feels guilty afterwards. The guilt prompts the person to consider what he or she did wrong and how to avoid similar outcomes in the future. The next time a comparable situation arises, there may be a brief twinge of guilt affect that helps the person to choose a course of action that will not bring distress to friends (and more guilt to the self) (2007, p 8[xiii])

Following this insight some emotions – fear and anger - can be seen as prompting to more or less immediate action, some – doubt and anxiety – prompting to reflection about issues currently faced, and yet others – regret and guilt – prompting to reflection about past actions[xiv]. Thus: fear and anger interrupt ongoing actions and goals (cf. Simon, 1967), move alternative goals high up the value hierarchy, and orientate and urge to new action consistent with these goals; doubt and anxiety interrupt action as well but without placing any goals in a dominant position in the value hierarchy; regret and guilt change the background weighting to goals making these more chronically accessible for future actions.

Dewey on doubt and forked roads

Whether or not actors are urged to action or reflection can depend upon appraisals of whether there are obvious paths to take. Dewey suggested that reflective thought is motivated by

experiencing doubt, hesitation, and perplexity in the face of some mental difficulty, which urges searching, hunting, and inquiring to find material that will resolve the doubt, settling and disposing of the perplexity (Dewey, 1933). Dewey compared the move to reflective thinking, as analogous to coming to a fork in the road and needing to decide which path to take. He wrote:

> Thinking begins in what may fairly be called a forked-road situation, a situation that is ambiguous, that presents a dilemma, that proposes alternatives. As long as our activity glides smoothly along from one thing to another, or as long as we permit our imagination to entertain fancies at pleasure, there is no need for reflection. Difficulty or obstruction in the way of reaching a belief brings us, however, to a pause. In the suspense of uncertainty, we metaphorically climb a tree; we try to find some standpoint from which we may survey additional facts and, getting some more commanding view of the situation, decide how the facts stand related to one another. (1933, p 14)

James on the urges of impatience

James noted actors can experience impatience with the deliberative state, and are "prone… to act or to decide merely because action and decision are, as such, agreeable, and relieve the tension of doubt and hesitancy. Thus it comes that we will often take any course whatever which happens to be most vividly before our minds". This motivation to action "merely because action and decision are, as such, agreeable", is opposed by our "dread of irrevocability" (James, 1890, pp 529-530[xv]), which urges delay[xvi].

Anxiety and its urge to avoid a reflective stance

Luce, Bettman and Payne (1997, 2001) argue that the desire to avoid experiencing unpleasant feelings of emotions can interfere with fully entering a reflective state. They offer the example of a manager who is faced with the need to downsize a department and is considering whether to fire a less-skilled employee with a large family. The active consideration of this option, with its difficult tradeoffs, is likely to make the manager feel bad and motivate not reflecting on the difficult tradeoffs. As a result the manager spends a lot of time mulling over the decision, and although "overall decision-making time is increased, emotion can cause an avoidance of the

difficult, emotion-laden parts of the decision" (2001, p 19). The outcome of following these urges is that "somewhat paradoxically, an individual may more often use a normatively appropriate strategy when choosing a refrigerator than when making a crucial management decision" (2001, p 19).

Mele provides an alternative way that anxiety can urge avoiding reflection. On Mele's account anxiety can be interpreted as a signal of a possible unwanted truth and actors who desire to preserve their current plans elect not to investigate the source of the anxiety (Mele, 1997, 2001). The husband, anxious that her wife might be having an affair, or the manager, anxious that an employee might be defrauding the company, turn away from seeking or thinking about the evidence that would suggest the need to act, effectively choosing to maintain the status quo.

6.5 How compelling are desires?

Do emotions cause action (and inaction)?

To what extent though are the action tendencies of emotions only tendencies? Do desires compel seeking emotivational goals, whether to action or inaction?

Loewenstein argues that 'visceral factors', within which he includes, "hunger, thirst and sexual desire, moods and emotions, physical pain, and craving for a drug one is addicted to" are "highly aversive and have a disproportionate effect on behavior and tend to ''crowd out'' virtually all goals other than that of mitigating the visceral factor" (Loewenstein, 1996, p 272). Elster (1999) notes that shame can feel so bad as to motivate suicide.

It is not the case though that emotions directly cause actions. Baumeister, DeWall, Vohs, and Zhang point out that while "she did that because she was angry" is the commonly expression, a better phrasing is "anger directed her cognitive processing to focus disproportionately on certain possible outcomes, whereupon her behavioural decision process failed to take certain potential risks into account". Or instead she did that because she was afraid, "fear temporarily reordered his goal priorities, causing him to abandon one goal in favour of a seemingly urgent

albeit irrational goal of escaping the situation" (Baumeister, DeWall, Vohs, and Zhang, 2007, p 2).

On following one's heart's current desires

These re-descriptions are meant to capture how changes in cognitive processing, reordering goal priorities and focusing attention, predispose – urge, but do not force - actors to certain forms of response. Janis and Mann's description of hypervigilance – a state involving intense anxiety - is consistent with this analysis of changes in goal priorities, patterns of attention and interpretation, and strong urges:

> …a person in a hypervigilant state becomes obsessed with nightmarish fantasies about all sorts of horrible things that might happen to him, and fails to notice evidence indicating the improbability of their actual occurrence. The person is constantly aware of the pressure to take prompt action to avert catastrophic losses. He superficially scans the most obvious alternatives open to him and may resort to a crude form of satisficing, hastily choosing the first one that seems to hold the promise of escaping the worst danger. In doing so, he may overlook other serious consequences, such as drastic penalties for failing to live up to a prior commitment (Janis and Mann, 1977, p 74).

The re-descriptions of Baumeister *et al*. assume the emotions served the actors poorly; an alternative could be that "fear temporarily reordered his goal priorities, causing him to abandon one goal in favour of an urgent goal enabling him to escape a highly dangerous situation". Janis, although advocating that decision making should normally be vigilant, argues that in some cases hypervigilant decision making can be appropriate; for example when "all escape routes are extremely risky and are closing off rapidly…[so that] …a person's impetuous choice in a state of hypervigilance may give him a better chance of surviving than remaining in a more controlled state of vigilance, which makes for delay in taking action" (Janis and Mann, 1977, p 65[xvii]).

The claim that emotions are irrational is often linked to emotions' urges, impelling actors against their better judgment, to engage in behaviour that they will later rue at their leisure. However as emotions change interpretations of the world and goal priorities, the desire of the

emotion can seem a reasonable response to how the world is *now* interpreted and what is *now* at stake. It is only after an emotion subsides when another interpretation of the world comes into view and goal priorities are re-ordered, that regret might become the order of the day. Regret can be combined with incomprehension (how could I have acted so foolishly?) as actors can misremember how intense urges are when not in these states leading to 'hot-cold empathy gaps' between emotional and non-emotional states (Loewenstein, 1996).

Reflective distance and choosing whether or not to follow desires

This analysis implies that one requirement for not acting on the basis of an emotion is to have some reflective distance from the assessments of the emotion and its emotivational goal; a detached, reflective - rather than an immersed - awareness (Lambie 2009; Lambie and Marcel 2002) where the actor can 'stand back'. This standing back need not be non-emotional. In Dicken's A Christmas Carol Scrooge is shown, in an emotionally compelling way (appraisal dimensions are triggered), how he has become the miser he is, the emptiness of his current life, how others see him, and the full implications of his beliefs and actions for the welfare of the poor dependant upon him. Shown the full implications of the life that he is living he becomes ashamed of who he is and the values he is living by, and he wants to try to change his 'character'; character change can here by understood as changing patterns of emotional response and values lived by (see also Helm, 2001, on character revision through conceptual and emotional reflection).

Limitations to reflective distance

A reflective awareness in itself is ineffectual if desires are so compulsive they cannot be resisted or redirected, even if not fully trusted – whether these are desires that 'force' action or continuing (interminable) reflection. Baumeister *et al.* are perhaps not being fair to common sense when claiming that the natural tendency is to view emotions as causing actions, as natural language has a wide array of vocabulary (tendency, desire, urge, craving, compulsion) to reflect the different felt intensity to desires and how easy they are to resist. Nor, contra Baumeister *et al*., does this seem to be the common assumption in the emotion literature - Frederickson writes, "No theorist would argue that people invariably act out these urges when

feeling particular emotions. But rather, people's ideas about possible courses of action narrow in on these specific urges" (Frederickson, 1998, p 302).

Besides judgments about whether emotions' urges should be followed and their felt intensity, the extent to which urges are acted upon are influenced by coping appraisals (Lazarus, 1991) and beliefs about whether the action will ameliorate the unpleasant feeling, or generate a pleasant one (Bushman, Baumeister, and Phillips, 2001; Leith and Baumeister, 1996).

Getting desires on your side

James referred to action carried out with "the slow dead heave of the will", in which actors experience "subjectively and phenomenally, the *feeling of effort*" when they have chosen with "dreary resignation" either for the sake of "austere and naked duty" or when choosing between two equally enticing courses of action, aware that in choosing one the other forever becomes impossible (1890, p. 534, emp. in the original). These observations suggest that unpleasant feelings are sometimes *borne* in acting counter to the desires of emotions.

Acting with the desires of emotions behind one is easier and preferable – this will be the case when emotions are believed to be providing trustworthy information and the emotivations point one towards a wise course of action. When emotions' guidance is doubted, actors can recognise the unwanted impact of their desires and seek to modify their situations - changing their 'choice architecture' (Thaler and Sunstein, 2008; Schelling, 1984) - so that the likelihood of experiencing these unwanted emotions and their urges is reduced. Similarly, the likelihood of experiencing wanted emotions and their emotivational goals can be increased by putting oneself in situations where they are triggered.

Notes:

[i] There is considerable philosophical debate over the nature of cognition in emotions and to what extent it is like a perception or a belief. These differences are less important than the similarity as all the theories share the view that 'appraisals',

'construals', 'engagements' or 'judgments' are at least 'belief like' so can provide, depending upon the level of processing, some information about our relationship with the world.

[ii] The alarm analogy was taken by Oatley from Stephen Draper (Oatley, 1992, p 422n24). The alarm metaphor is, like all analogies, only partly illuminating – while it captures the attention grabbing, interrupting nature of emotion, it ignores their intentionality and hence their informational content. Alarms tend to tell you little except that there is danger, not what this danger consists in so alarms are more like pains than emotions (cf. Nussbaum, 2001).

[iii] On Nussbaum's account it is our perceived fragility in the face of the world that underlies all emotions (2001, 2004)

[iv] Nussbaum offers this as a definition of the content of these emotions rather than as appraisal dimensions; on this account if there is not this content it doesn't count as fear. Such a definitional account is not informative about the psychological processes underlying why fear occurs, but might rather be a conceptual analysis of the emotion term. Nussbaum does seem interested in the causal question and qualifies the 'mustness' of this position (see her own example of emotions felt at her mother's death towards the hospital staff).

[v] Some causes of emotion – for example music and social contagion - don't fit into this conceptual structure very well, as they seem to have little to do with appraisal of the environment, at whatever level of processing, and its implications for well-being.

[vi] While this is generally true, some emotions, such as a sense of awe before the Grand Canyon, seem hardly connected to our goals at all. Scherer (2005) distinguishes utilitarian emotions and (following Kant's idea of disinterested pleasures) aesthetic emotions such as being awed or wonder.

[vii] See chapter one for the full quotation.

[viii] This diagram and figure 3 are from Moors, 2009, p 635

[ix] The possibility of emotional transformations provides an alternative possible explanation of guilt to cognitive elaboration. The participants in the study above might also be unaware of the transformations of emotions where emotions hide their own judgments in the interest of defending self-esteem – if this is the case it is possible that the 'feeling towards' (Goldie, 2000) of the emotion - a felt sense of guilt towards the self about others - remains while the belief that the self did wrong is covered over. Alternatively participants might be using emotion vocabulary as a communicative strategy in negotiating an interpersonal difficulty; by expressing guilt they are helping to repair a rupture (Parkinson, 2001).

[x] This analysis draws upon Lawler (2004)

[xi] It seems possible that magical transformations can happen either automatically or through a biased process of reasoning where we look for support for the conclusions we emotionally wish to reach, and discount evidence against these conclusions.

[xii] This is not to support Plato's hypostisation of the mind/brain into 'parts'.

[xiii] This account is influenced by Damasio's Somatic Marker hypothesis, where the Somatic Marker supplies the 'twinge'.

[xiv] Prospective guilt and anxiety can be experienced about contemplated actions, but these are perhaps better classified as a form of anxiety (see above).

[xv] The full quotation is provided in chapter 2.

[xvi] Janis' Emotive Rules (1989) can be understood within this framework. Anger (Retaliate!) and even pride (Go for it!) urge immediate action on the basis of goals pushed high up the value hierarchy by the emotion, while frustration (Wham! The hell with the consequences) and reactive elation (Wow! Grab it!) are urges from impatience with an unpleasantly valenced reflective state.

[xvii] Although this example does conflict with his account of hypervigilance as normally involving a very high rate of vacillation (Janis and Mann, 1977, p 78) – perhaps there is more than one psychological state underlying these different forms of behaviour.

CHAPTER FIVE: Integrating Emotions into a Structured Procedure

Chapter Contents

1. Emotions are neither functional nor dysfunctional, but fallible resources for reflective decision-makers

Given this analysis of emotions from the previous chapter what follows for an account of wise decision making? While some theorists argue for the functionality of emotions, and others for their dysfunctionality, it is proposed that a better perspective is to see emotions as fallible resources for reflective decision-makers.

1.1 Emotions as functional

The benefits of emotions for the boundedly rational

Within the recent literature there is one school of thought which points to the benefits of emotions in decision making (e.g. Damasio, 1994; Hanov, 2002; Zeelenberg, Nelissen, Breugelmans, and Pieters, 2008; Pfister and Bohm, 2008). Hanov, for example, writes:

> emotions function as an information processing mechanism with their own internal logic, working in conjunction with rational calculation. By restricting the range of options considered (reducing the load on short and long term memory), by focusing on certain variables (certain stimuli receive higher ranking order), and by initiating and terminating the evaluation process (working as a satisficing mechanism), emotions supplement the insufficiencies of reason (2002, p 7).

On this account emotions help the boundedly rational decision-maker by constraining the decision-making space within manageable limits. Emotions interrupt an on-going course of action, direct attention to relevant aspects of a changing situation, set new goal priorities as emotions push at risk goals up the value hierarchy, and limit the courses of action considered as emotivational goals set the scope of the decision to - for example - moving away from something threatening (fear) or moving against something obstructive (frustration). Furthermore emotions ready the body for appropriate responses and provide the desire needed to motivate action. In this way decision-makers are able to make timely and directed responses to the situations they face.

The evolutionary explanation

This perspective also fits within an evolutionary account - if emotions have evolved then there is a presumption that they are functional in some way. Haselton and Katelaar (2005) summarise Tooby and Cosmides' evolutionary account (1990, 2000) of the role of emotions as superordinate cognitive programmes coordinating the 'massively modular' mind's multitude of subprogrammes:

> emotions serve … this… governing function by orchestrating systems of perception, attention, goal pursuit, and energy and effectiveness, as well as by activating specialized inferences, recalibrating decision weightings, and regulating behavior. Take, for example, the emotion of fear. Imagine walking alone at night and hearing some rustling in the brush. Your energies are aroused to ready you for action, you become acutely aware of sounds that could indicate that you are being stalked, the threshold for detecting movement is lowered, you no longer feel pangs of hunger, attracting a mate is the farthest thing from your mind, you recall where there are good places to hide, and you act—by running, hiding, fighting, or ceasing all movement, depending on the circumstances.

Welch (1989), in his review of Herek, Janis, and Huth's (1987) research into US presidential decision making, criticised Janis' normative account of Vigilant Decision Making. One of the Prescriptive Norms is that decision-makers should consider a wide range of possible options. Welch wrote, "we should hope and expect that a decision maker will be able to identify a fairly narrow range of alternatives promptly, and devote scarce resources to their proper exploration". Thus, "[w]hat Herek, Janis and Huth consider to be signs of pathological decision making were, under these conditions, necessary and appropriate to the circumstances" (1989, p 442). Perhaps emotions serve this function of narrowing the consideration of alternatives and enable effective 'hyper-vigilant' decision making in threatening and time-constrained circumstances.

1.2 Emotions as dysfunctional

The drawbacks of emotions for the wise

Another school of thought points to the drawbacks of emotions in decision making. Baumeister, DeWall, Vohs, and Zhang provide examples as we saw in the previous chapter: "anger directed her cognitive processing to focus disproportionately on certain possible outcomes, whereupon her behavioural decision process failed to take certain potential risks into account" and "fear temporarily reordered his goal priorities, causing him to abandon one goal in favour of a seemingly urgent albeit irrational goal of escaping the situation" (Baumeister, DeWall, Vohs, and Zhang, 2007, p 2[i]).

The evolutionary explanation

This school too recognises evolutionary arguments but considers modern environments to be too dissimilar from the environment of evolutionary adaptedness for emotions to be sensitive guides and doubts whether evolution's goals should be human goals (Stanovich, 2005) – in Goleman's populist phrasing humans have stone age minds in a modern world (Goleman, 1996). Pinker writes that our automated subsystems, which include emotional responses, are "designed to propagate copies of the genes that built them rather than to promote happiness, wisdom, or moral values. We often call an act 'emotional' when it is harmful to the social group, damaging to the actor's happiness in the long run, uncontrollable and impervious to persuasion, or a product of self-delusion. Sad to say, these outcomes are not malfunctions but precisely what we would expect from well-engineered emotions" (Pinker, 1997, p 370).

1.3 Emotions as fallible resources

Just having emotions is not enough

The third perspective, that decision-makers can use their emotions as fallible resources, is summarised by Lambie: "the point is not only to *have* emotion experiences; the point is to make sense of them" (2009, p 272) as "awareness and deliberation increase the propensity for rational action" (2008b, p 977). This is not to claim that "*only* awareness or *only* deliberation can produce rational action" (2008b, p 977, emp in original), rather that, "[h]aving emotions (even when one is not aware of them) is better overall than not having emotions: nonreflective emotions play a heuristical role in increasing the prudentiality of the organism's actions. But, being aware of emotions is better still: reflective emotions lead to more prudent actions overall than nonreflective emotions" (2009, p275).

The evolutionary explanation

Lambie justifies this position by an appeal to evolutionary design. While Nesse's (2005) smoke detector - better safe than sorry - principle, leads to a predisposition to respond to potentially dangerous events with fear, he notes that, "Although the smoke detector principle may be adaptationally optimal in a particular environment, it is easy to see how it could become nonoptimal if the estimation of the probability of harm is not flexible and sensitive to changes in the environment" (2009, p 276). Because of this:

> the emotion system has evolved with an adaptive but biased design. It is thus positively detrimental to rational action selection to naively follow the suggestions of the emotion system (e.g., the impulse to flee in fear). Instead, practical rationality requires that the output of the emotion system be modulated and if necessary inhibited; or more generally, that it be "criticized" (2009, p 276).

As an example, our modern environment often requires public speaking, an activity that can cause intense anxiety and an emotivational goal to move away from. Lambie and Baker (2003), in an experimental comparison, found that 'repressors', who were not aware of their anxiety, were more likely to opt out of public speaking than any other group, including those with high

anxiety. They explain this difference as repressors, being unaware of their anxiety and its desires, were unable to inhibit – to 'criticise' - the tendency of the anxiety. Evidence for this claim is that in explaining their withdrawal repressors gave non-emotional explanations, such as needing more information, whereas those in other groups who opted out explained their withdrawal as due to anxiety, worry or embarrassment.

It is possible that decision-makers following Janis' Emotive Rules (1989) are similarly acting on the basis of emotions of which they have little understanding. The decision-maker might be unaware that they are angry and as a result of this seeking retaliation, or frustrated and ridding themselves of distress, and the consequent implications for the limited range of courses of action considered and goals and values expressed. At the meta-level decision-makers might be unaware that they are acting on the rule "do whatever your gut feeling dictates at the moment" (p 71). As Lambie and Marcel (2002) point out actors can be aware in different modes, so it is possible to be aware that one is angry without being aware that this is predisposing one to a retaliatory response – reflective acting requires a synthetic awareness of the emotion[ii].

Reviewing the drawbacks to emotions

While Lambie (2009) questions the wisdom of acting on emotions, as they might be poorly calibrated, more generally the drawbacks of acting non-reflectively on emotions follows from the account of emotions presented in the previous chapter.

There is a simple way that emotions can inform or misinform; if, as it is argued, emotions can be seen as bound to appraisals, then these appraisals can be accurate or inaccurate. For example consider the experience of becoming angry while waiting to be served at a restaurant. This anger might be based upon a simple misreading of the situation. The waiter is aware of us and our needs but is very busy and needs to deal with prior orders before serving us; once we realise this we recognise that our anger is unfounded because we have misread the situation.

More subtly our anger can also be a misappraisal if the theory of value upon which the anger is triggered is unenlightened; we are accurately aware that the waiter is busy and that he is

dealing with prior orders before being able to serve us, however we -or at least our anger - believes that we should be served in priority to others. Here we are - perhaps implicitly only - valuing our own needs above the equal needs of others and our anger is based upon the evaluation that we (of all people!) should not be treated in this way. In this case to determine whether the anger is unfounded we need to assess the values, rather than the facts, implicit in the emotion's appraisal.

The table below, based on material covered in this and previous chapters, summarises some ways that emotions might mislead decision-makers.

Table 35: Some ways emotions can mislead

Mislead	Source
Inappropriate:	through being based on inaccurate assessments of situations
Unenlightened:	as based on questionable goals and values
Distorting of beliefs and values:	through 'appraisal tendencies' (Lerner and Keltner, 2000), 'magical transformations' (Nietzche, 1994; Sartre, 1997; Solomon, 1973, 1993; Elster, 1997) and 'cognitive elaborations' (Frijda, 1993).
Self-justifying:	through seeking their own evidence (Goldie, 2000).
Focused only on single goal:	pushed to dominance in the value hierarchy (Baumeister *et al*, 2007).
Overly self or group centred:	by failing to consider the interests of more distant others (Hume, 1777; Hopkins, 2004).
Disabling of proper ethical consideration :	of others and of self through, for instance, disgust/self disgust and hatred/self hatred (Glover, 1999; Nussbaum, 2004; Nathanson, 1994).

Moreover emotions can be hasty, with desires pushing to action, or conversely lead to paralysis through desires to reflection (James, 1890). In addition many emotions tend to be myopic, focusing on the present, and time-specific being triggered by particular circumstances with varied levels of intensity. Given this they lack a consistent 'take' on the world, so propel different goals and values, with changing levels of importance, into the spotlight at varied

moments. While this might be beneficial for adapting to changing circumstances it can also make following a consistent path difficult.

It follows that decision-makers should be cautious about trusting and relying upon emotions. Does it follow that they should ignore them? This is both unrealistic and unwise. It is unrealistic as decision-makers' will experience emotions (in different modes of awareness) whether they want to rely upon them or not. It is unwise as these emotions are likely to impact upon their decision making whether they want this to happen or not.

While Lambie (2009) emphasises being aware of emotions so that they can be criticised and hence their emotivational goals inhibited this is only one way to reflectively respond to emotions. Emotions, as they contain appraisal information, can be helpful to decision-makers by revealing to them more about their self-in-situation, and this information from emotions can be used reflectively.

1.4 Using emotions reflectively as a fallible resource: three illustrations

How to use emotions reflectively will be illustrated through considering three different theorists and examples.

Nussbaum and her career decision

Nussbaum (2001, p 69) recounts how she reflectively used the evaluative assessments in grief to help her make a career decision:

> In 1995, when I was deciding whether to move to the University of Chicago from Brown, I experienced, as I thought of being in Chicago, a powerful grief. What was its object? If the object was the Brown Philosophy Department, then this was a sign, perhaps, that I should not make the move: Brown was more important to me than I had been inclined to think. On the other hand, there was a good possibility that the object of grief was a much more vague and elusive object, such as "my past" or "the years of my youth," since I had spent twenty-five years living in Cambridge, Massachusetts, before that. This highly general object, unlike the Brown Philosophy Department, was definitely not in my power to regain; so it would not have been such a good idea to stay in Cambridge simply in order to avoid mourning for twenty-five years of my past. By thinking about situations in which I experienced the grief, and considering the pattern of my other judgments and actions, I decided that the past was probably the real object of the grief, and I did move to Chicago.

This account displays the promise within emotions, that they can help decision-makers find out what is important to them about the situations they are facing, while also indicating their often-elusive nature, and the struggle to clearly identify their 'aboutness'. The difficulty for Nussbaum is not in knowing that the emotion is grief, nor that the grief is about the thought of leaving Brown; it is more specific than this – Nussbaum does not know what it is about leaving Brown that might be the source of the loss. Nussbaum, disappointingly, tells us little about how she pinpointed the 'aboutness' of this grief. Maybe in reflecting on other contexts of her life - perhaps her changing physical condition as time takes its inevitable toll, perhaps her now grown children and their absence from her everyday life, perhaps the loss of the romantic excitement and freshness of a newly begun relationship - she found the same pattern of grief for what has passed. Perhaps too, despite the grief, she was excited by various opportunities at

Chicago and came to see that making this move would fit in with other decisions she had taken in the past, and how she wanted her life to develop. Nussbaum came to believe that the grief was about "the years of my youth", so concluded that there was no message in this grief she could use to choose between the two options, as it was beyond her power to regain this object. Better rather to not act on the emotion.

Allowing ourselves the liberty of wild speculation about Nussbaum's psychology, it is possible that this dismissal is too quick The grief might be bound up with an existential guilt about chances not taken, directions not followed through, and delving more deeply into the sources of grief of these past losses might point to values still open to her, even though she had long closed herself off from them[iii]. There are other possibilities too; the grief over the loss of her youth might be distorting through a 'magical transformation' her understanding of what was on offer in Chicago, perhaps unknown to herself she was fooling herself that she would be able to recapture aspects of her lost youth in the move.

Oatley and Anna Karenina's love-life decision

Oatley's analysis of Anna Karenina provides further insight into exploring the role of emotions in decision making. Anna, herself stuck herself in a soulless marriage, had come to Moscow with the conscious intention of meeting her brother to help him repair his marriage. Following witnessing an accidental death she left two hundred roubles with the handsome Vronsky for the widow – a gift she does not like to think about – and as she left the station her lips trembled and she had trouble keeping back tears; she is left with a disagreeable feeling.

Neither Tolstoy nor Oatley offer us an account of what might be behind Anna's emotional response on leaving the station, nor her sense of disagreeableness about the gift of roubles, although these responses - emotions at the juncture of plans - hint at other goals besides her explicit purpose, not fully in awareness. While this emotion is evidence that something important has occurred, and that emotions "can point to aspects of our goal structures that we may have been unaware of" (ibid, p 34) it is less clear that this emotion is functional in the

sense of re-orientating Anna's plans. She seems more preoccupied than active, more lost than re-orientated.

Anna's unwillingness to mention the roubles could be because Vronsky is wooing Kitty, her sister-in-law. Superficially Anna's unwillingness might be based around a desire not to hurt Kitty with the realisation that Vronsky is a less than dedicated suitor, for Kitty is in love and has hopes of marriage. But to admit this would be to admit that Vronsky is interested in her, and what, on the basis of subsequent events is plain, that she is interested in Vronsky. The 'disagreeable feeling' she experiences is at best a murky guide for Anna to her own goals and values, so although she might be preoccupied with this feeling it is difficult for her to consciously use this emotion to make plans.

Anna might have been able to develop greater self-understanding, and hence the capacity to make her decisions in the light of greater knowledge, by exploring this disagreeable feeling, investigating what the specific emotions were (shame or guilt perhaps) and what these emotions was about (perhaps shame around what others would think of her flirtation as a married woman, and guilt over the implied treatment of her husband). She might too find that beneath this disagreeable feeling lurked excitement at the prospect of romance with Vronsky, and behind this excitement resentment towards her husband's preoccupation with state business and her consequent neglect, and sadness with his chilling cynicism towards romance, so out of tune with her own passionate nature. Through further reflection on these emotions Anna might come to realise what she was currently lacking in her life, and the implicit values behind her actions. Equipped with this kind of self-knowledge, *wrestled from* as much as *thrust into* consciousness by her emotions, she might be better able to consider the values she wishes to live her life by and to choose more wisely.

This account implies that we are not simply subject to experiencing emotions, whether at the junctions of plans or elsewhere, as Oatley seems to imply. We can consciously trigger and explore our emotions by reflecting upon matters of concern to us, by directing our attention to, for example, expectations about the future, the actions of others, or the attributes of ourselves and objects. Oatley's account of when we experience emotions is perhaps over- automatic, and

misses out both how we can access emotions through reflection, and how we can explore these for their implicit messages to take a more reflective stance to what we value and pursue.

Damasio and the businessman's dilemma

Emotions as a fallible resource for the reflective decision maker can also be explained through a critical examination of Damasio's account. Damasio observed (1994) in his brain-injured patients these three characteristics:

i)   Normal intelligence (at least as measured by a wide range of intelligence tests)

ii)   Poor at making decisions

iii)   Emotional flatness, with little emotional response (even to the terrible circumstances resulting from their poor decisions)

Damasio uses these three characteristics to argue against what he calls the "high reason" view of normative decision making (*ibid*, p 171) - if reason, unencumbered by emotion, is what is required these brain-injured patients, who differ from 'normals' not by the absence of reason but by the absence of emotion, should be experts - not failures - at making decisions. Damasio tells the story of his patient, Elliot, trying to make an appointment - with two possible dates to choose between he spent the better part of half an hour debating their pros and cons, before having one selected for him by staff, to which he responded promptly and calmly 'that's fine'. As well as this difficulty making minor decisions Elliot cannot keep jobs and embarked on unsound new business ventures losing all his financial savings; a remarkable change to his life, prior to the damage to his frontal lobe, as a sober financial man. Despite his history of personal loss through disastrous decision making, Elliot "did not learn from his mistakes" (ibid, p 38).

This failure to learn from mistakes and make decisions is, Damasio argues, because Elliot lacks 'somatic markers' laid down by experience[iv]. Damasio summarises: "When the choice of option X, which leads to bad outcome Y, is followed by punishment and thus painful body states, the somatic marker system acquires the hidden, dispositional representation of this response-driven, noninherited, arbitrary connection. Re-exposure to option X, or thoughts about outcome Y, will now have the power to reenact the painful body state and thus serve as

an automated reminder of bad consequences to come" (ibid, p 180). According to the theory 'somatic markers' would have helped Elliot to make the appointment as they would "detect the useless and indulgent nature of the exercise" which marked the waste of time as negative, and others looking at us as embarrassing (1994, p 194)[v].

To illustrate the general conclusions Damasio believes can be drawn from these cases of brain-damaged patients he presents the following decision-making dilemma facing a businessman:

> Imagine yourself as the owner of a large business, faced with the prospect of meeting or not with a possible client who can bring valuable business but also happens to be the archenemy of your best friend, and proceeding or not with this particular deal (ibid, p 170).

According to the 'high reason' view the owner needs think of different outcomes and perform a cost/benefit analysis of these. To calculate the financial gain the owner needs to calculate the immediate financial reward, and the future financial reward, which is of an uncertain amount, with a variable rate of return estimated over time. To be weighed against this 'pro' there is the 'con' of the danger of losing the friend, the cost of which is calculated and which also varies over time, according to a "depreciation" rate.

The alternative to the high reason view Damasio advances is the 'Somatic Marker Hypothesis'[vi]. According to Damasio "the brain of a normal, intelligent, and educated adult reacts to the situation by rapidly creating scenarios of possible response options *and* related outcomes" (*ibid*, p 170, emp. in original). Examples of these scenarios would be, in the businessman case (a) being seen in the client's company by the best friend *and* losing a valuable friendship, (b) not meeting the client *and* losing business[vii]. As these scenarios flit before the mind, before any conscious cost/benefit analysis, the businessman experiences an unpleasant gut feeling, the 'somatic marker', which forces attention on the negative outcome of the imagined action, and functions as an automated "alarm signal which says: Beware of danger ahead if you choose the option which leads to this outcome" (*ibid*, p 173[viii]). This is a descriptive claim of what tends to happen. But *should* decision-makers follow their gut response to screen out options and (possibly) choose a solution?

One justification provided by Damasio is that emotions can provide a 'common currency' for the "comparison to make any sense at all" (*ibid*, p 171). However if values are truly incommensurable then they are, regardless of whether reason or emotion is making the choice. What both friendship and business success might have in common is some bad feeling experienced by the businessman when he contemplates losing either. That one shouldn't have unpleasant experiences is a different value again, so now the businessman needs to consider three values: business success, being a good friend, and how he will himself feel as an outcome of the choice[ix].

Choosing in the face of 'incommensurable' values - in the businessman case between the goods of friendship and business success - is all too common in real-life situations. The existence of 'incommensurable' values, all of which cannot be satisfied, is one of the *sources* of the emotional difficulties in making decisions (see also Luce, Bettman, and Payne, 1997, 2001). The businessman might experience hope and excitement over the prospect of financial gains, and prospective regret and shame over the potential danger to his friendship, and these emotions, rather than solving his decision making are the phenomenological experience of the dilemma.

In matters of the heart, such as friendship and love, it is often thought wrong even to think of such things as the 'depreciation' of friendship; friendship shouldn't involve rationally calculating costs and benefits as if it were a cold financial matter but rather acting straight from the heart, for our friend's sake. Thagard quotes a cartoon which shows a man sitting at a computer talking to a woman "I've done the numbers and I'll marry you" to illustrate the offence in calculating matters of the heart (Thagard, 2001; see also Girgerenzer, 2007). If this is so the somatic marker, which is a kind of automatic calculator of the costs and benefits of emotional pain to the decision maker is also morally indefensible. Wise decision making is deciding on the basis of what decision-makers reasonably care about (enlightened values), and this need not be just financial considerations, or self-interested experiences, and can include love's consideration of others (Nussbaum, 2001).

Using somatic markers to screen out options and produce a smaller choice set can certainly reduce the complexity of 'calculation' and the consequent costs of calculation such as time spent, thus also reducing the demands on memory and attention[x]. As Elster (1991) points out gut feelings are not the only way to cut through the maze of a complex decision-problem, as decision-makers can also, for instance, toss a coin or satisfice. To believe that the 'high reason' view implies decision-makers must consider every option, and to calculate, is to be "addicted to reason" (*ibid*, p 295); decision-makers can reasonably judge that the costs of such a strategy are too high and deliberately limit options.

Nevertheless, if gut feelings are not the *only* way, are they the *best* or a *good* way to trim the choice set? Somatic markers, according to the theory, are the product of our past history, stored as emotional responses to past experience. To the extent that these past experiences are representative of the situation currently faced, then they can be a good guide[xi]. Even so there is reason to be wary, as similar situations vary and checking the accuracy of a gut response might be a prudent policy, particularly when the decision is important.

Let us suppose that the businessman has had a previous, emotionally difficult, experience of losing a friend through the same kind of situation he now faces. His gut response, based on the previous experience, is, according to the theory, likely to be intense discomfort when he imagines his present friend seeing him with this new client. If he follows Damasio's advice he will screen out this option. But is this wise? Are the situations really sufficiently similar? There might be variations between past and present circumstances, which the gut response is insensitive to. Perhaps he needs this client otherwise his business will fail and he will be unable to support his family, or perhaps this present friend, unlike the lost friend, can accept that a business relationship does not imply compromising the friendship. While the businessman's gut might accurately take these possibilities into consideration there is surely no guarantee that it will (see also Shiv, Loewenstein, Bechara, Damasio, and Damasio, 2005; Ratner and Herbst, 2005).

Furthermore there might be a chance for the businessman to learn from his past to act in a *different* way, rather than simply to *avoid* a course of action that previously resulted in an

unpleasant experience. Maybe the previous friend was lost because the businessman lied to him, telling his friend he had nothing to do with the client, hoping his friend would not find out. When this lie was discovered, the shock of discovery left the friend feeling betrayed - stabbed in the back - and angrily he broke off the friendship. The businessman, by using the messages in his emotional response to this outcome, such as regret and guilt over his dishonest representation of the business relationship and dismay over the loss of the friendship, might be able to learn how to creatively mould a win-win option in which he can both have the new client *and* keep his friendship (see also Roese, 2005; Epstude and Roese, 2008).

Damasio talks of options being *automatically* screened out. This might happen with options not entering consciousness or being rapidly dismissed when they make a fleeting appearance tagged with an unpleasant gut response. If, as argued, options can be unwisely screened out by gut responses, this would suggest that decision-makers need to hunt for more options, or recover options automatically screened out, perhaps by paying careful attention to their fleeting appearances in consciousness.

1.5 Becoming reflectively aware of emotions

Elster, while noting that people can experience an emotion without being aware of it, points to the manifestations of emotions that are indicators to their identification: "Love can manifest itself simply as constant attention to the other person, happiness when being with him or her, frustration or grief when the other person seems unresponsive, and so on…. Envy…can manifest itself in a sharpness of tone and a tendency to adopt a derogatory slant that are obvious to observers but not the subject" (1999, p 256). These kinds of manifestations of emotion can enable moving awareness patterns from 'analytic' to 'synthetic' (Lambie and Marcel, 2002) – this self-conscious awareness is required for emotions to be reflectively used as fallible resources.

But to what extent can decision-makers be, or become, aware of the distortions of emotions and hence able to re-evaluate the wisdom of these emotions? For example the challenge to self-esteem in having to recognise appropriate guilt and shame, is a temptation into self-denial and the consequent avoidance of the required changes. This self-deception might be accomplished by focusing attention elsewhere (Mele, 2001), a tendency which can be corrected. It is possible that Horshchild's flight attendants (from the previous chapter) are also able to recognise the strategies they use and determine whether their emotional labour is a disvalue as it is based on an 'inauthentic' emotion, or whether they choose to avow the emotion as part of the kind of person they wish to be. Gaining reflective self-awareness seems harder for Solomon's husband (also from the previous chapter) as his emotional transformation needs to hide its purpose in order to be able to maintain its role - as a justification for why he cannot go to the party - in his emotional economy. After all how can he go, he has no shirt; moreover he is in the morally superior position, as she did not do her job properly, so she has no right to even make the request. To recognise that he does have a shirt and that Joanie has a moral claim are to undo the function of the anger. Even though the emotion of anger does misinform the husband about both facts of the situation (the availability of shirts) and values at stake (the moral claim of Joanie) it does also, if sensitively interpreted, provide an important insight – namely that the husband does not want to go to the party. An assessment of the evaluations within the anger, and other emotions behind the anger about the party (and Joanie), can help to uncover the

unnoticed or disowned values of the husband (what is it about the party that is disvalued?) and perhaps enable a more thoughtful response based on more enlightened values.

Further sources of information that can be used in seeking to decode emotional distortions include (Lazarus, 2001):

- contradictions between what a person says at different times
- contradictions between what a person says and behavioural and physiological evidence
- contradictions between what a person says and what others tend to experience in similar situations

Lacewing (2005) suggests that it is possible to discern the manipulations of emotions by examining second-order emotions about emotions, and illustrates with this case:

> Someone not given a promotion because he was not the best person for the job, may feel resentful of his boss, but come to believe that his boss resents or hates him (this neatly provides a rationalization for his lack of promotion, as the worker refuses to recognise his unsuitability for the post) (Lacewing, 2005, p 70)

The worker's unfounded resentment is harmful to the relationship with his boss and undermines his decision making about his career as it denies him important information about his own abilities and where he needs to improve. Lacewing proposes that the worker might feel anxiety about his resentment towards his boss, and that exploring this anxiety could enable the worker to gain insight into the causes of his resentment.

The box below lists the sorts of questions that decision-makers can ponder to take a reflective stance to their emotions and how they relate to the decisions they are considering.

Table 36: Some questions for reflective decision-makers to ask about their emotions

Are you in a sufficiently calm, non-absorbed state to take a reflective stance towards your emotions?

What are the emotions you are experiencing? (consider the clues)

How intense and frequent are your emotions?

How does your emotion change during the decision-making process?

What is your emotion about – its appraisals/intentionality of the situation and concerns?

Is the emotion to do with something else than you think? What else is going on that might trigger it?

Specifically what 'messages' does the emotion have about:
- your situation, including the role of yourself and others in it - is this fair and accurate? –for example are emotions urging to self-validation rather than truth?
- your goals and values at stake in this decision-problem - are these goals and values enlightened? (for example how important is how you feel (phenomenology), 'being right' and 'getting your own way' compared to other values at stake?)
- your capacities to cope with the situation – what resources do you really have, can you resist impulses to action?
- the courses of action or inaction that are fore-grounded and urged - are these realistic and in accordance with your enlightened values?
- how you are going about deciding - are you approaching this sensibly (for example is acting in the 'heat of the moment' wise,)?

How do your emotions relate to other emotions?

What emotions do you have about your emotions?

What future emotions might you experience and how might these impact on your decision?

What might be different if you did not experience this emotion and how would this change your interpretation of your decision-problem?

What emotions might you experience if your situation were different and how would this change your interpretation of your decision-problem?

What features of your situation are highlighted by your emotions?

What aspects are kept in the shadow out of the spotlight of emotions? Do these warrant further investigation? Do you have the time etc. for this?

Where do your thoughts turn to when experiencing a particular emotion, and are these fair?

Are you avoiding investigating where your emotions are pointing?

Are your emotions (positive and negative feelings) unfairly colouring how an option is evaluated?

Are your emotions motivating you to take the appropriate level of care in deciding? For example do you have false confidence?

Can you motivate yourself by imagining future feelings – for example regret at not acting, shame at what others will think?

2. An Emotion-Enabled Structured Decision-Making Model

If emotions can be used as fallible resources by reflective decision-makers it follows that it is possible to make use of them within a structured decision-making process.

2.1 Reviewing the nature of a decision

Chapter two clarified the nature of a decision, which was analysed as consisting of:

- An on-going **Situation**, which can be well or poorly understood, within which is located a **Decision-To-Be-Made**, which can be well or poorly framed.
- **Values-at-stake**, which can be more or less enlightened.
- Possible **Options**, which can be spotted or missed, with **Consequences** which can be well or poorly predicted.
- A **Choice**, which can capture or fail to capture worthwhile values.
- **Action** which can be effectively or ineffectively carried out.
- A **Review** of the outcomes of the choice which can be insightful or a 'cover-up'.

Drawing upon the analysis of emotions, what does this suggest about how emotions might help or hinder at different stages in decision making and what tasks might there be for decision-makers to make wise use of emotions as a fallible resource.

2.2 Integrating emotions into a structured model

Stage 1. Understanding the situation and clarifying the decision-problem

Emotions are triggered by the appraisal of challenges and opportunities within situations and how these impact on goals and values; emotions also direct attention to and interpret various aspects of the situation, and suggest responses to the challenges and opportunities through desires and emotivational goals. Thus emotions are, perhaps wisely or perhaps unwisely, judging situations and framing decision-problems.

Tasks for the use of emotions as fallible resources in understanding the situation and framing the decision-problem:

- Be aware that the world is seen interpreted through emotions' appraisals and distortions.
- Identify, explore and assess the accuracy of emotions for their understanding of the situation and self-in-the-situation.
- Note how emotions are framing the decision-problem, through 'desires', and 'emotivational goals'.
- Use emotions to direct search for further information.
- Challenge emotions' 'magical transformations' and 'cognitive elaborations'.

Stage 2. Identifying values and goals at stake

As emotions are evaluations of what matters to decision-makers, emotions can also be explored for their messages about *candidate* values for the reflective decision maker to assess. Even emotions inappropriately based on an inaccurate understanding of the situation point to what decision-makers care about –for example the person who is inappropriately offended because they falsely believe themselves to be snubbed still cares about the warm regard of others.

Some emotions, especially anxiety about making a good decision, point to values about the *process* rather than the *outcome* of making the decision - for example "I am anxious that I will

make the wrong choice", suggests the *process* value of trying to make the choice well, so can be reflectively used to motivate care in decision making.

Table 37: The kinds of values implicit in different emotions

Emotion	About…
Anxiety and fear (including prospective regret and guilt):	Threats to our goals and values in the future.
Hope and excitement:	Future possibilities beneficial to our goals and values.
Anger, resentment and frustration:	How have fared or are faring badly (including at the hands of ourselves and others).
Happinesses, satisfaction, gratitude and joy:	How we have fared or are faring well.
Disappointment, sorrow and regret:	How we failed to realise or lost what is valuable (and what we might be able to recover or let go).
Shame, guilt and pride:	How our self is viewed by oneself and others (and what changes to ourselves we might consider).
Envy, jealousy, admiration and feeling-sorry-for:	What other have or are (or don't have or aren't) that is valuable to us.

As a fallible resource, two dangers in using emotions as sources of values that the reflective decision maker needs to consider are (i) unenlightened values (especially through emotional transformations) and (ii) over or under- weighing values (especially through the instability of emotions).

Tasks for the use of emotions as fallible resources in working out what matters:
- Be aware that emotions contain appraisals of situations' impact on goals and values, and that these are pushed up and down the value hierarchy at different times.
- Uncover the valuations within a wide range of emotions to identify *candidate* values. Assess these candidate values for whether they are enlightened and important.
- Cross-check values and goals from other sources with emotions' evaluations.

Stage 3. Building a set of credible options

Emotion's desires and emotivational goals advocate courses of action. The reflective decision maker, using emotions as fallible resources, needs to consider whether these *candidate* courses

of action are based upon the range of enlightened values at stake and whether the course of action is likely to realise these values. Furthermore decision-makers need to be aware of whether these courses of action have inappropriate emotional 'colouring' through past associations.

Tasks for the use of emotions as fallible resources in finding a set of credible options:
- Be aware that the desires and emotivational goals of emotions suggest *candidate* courses of action (and resist impulsive action unless in an emergency).
- Use enlightened values to assess the tendencies of emotions (for example how appropriate is retaliation through frustration?).
- Use other tasks - such as a search guided by enlightened values and brainstorming - to identify further *candidate* courses of action.
- Identify, explore and assess the emotional colouring of candidate courses of action, judging whether these colouring are fair or not.

Stage 4. Choosing an option to maximise value

The analysis above suggests the reflective decision maker should not choose by following 'gut feels' but rather by extracting and evaluating information from emotions. Emotions can play a role though in cross-checking the choice and the process of reaching the choice. Decision-makers who are not proud of how they have decided we might suspect that they have not made the decision intelligently. If high levels of anxiety about the choice persist decision-makers might suspect that they have overlooked important difficulties. If decision-makers are not excited by the choice they might suspect that it does not sufficiently capture their enlightened values. These emotions too can be used as fallible resources and investigated for their potential insights.

Tasks for the use of emotions as fallible resources in choosing:
- Choose by assessing credible options against important and enlightened values and use emotions, such as excitement and willingness to embrace the choice, or reluctance to

act and doubt, and pride or anxiety about how the decision was made to cross-check the choice.

- Examine the appraisals/intentionality of these emotions for further messages to reconsider the interpretations of the situation and options, and the enlightened values of the choice.

Stage 5. Successfully carrying out the choice

Emotions, as fallible resources, can suggest possible barriers to our action. These barriers have both an internal and external focus. For example anxieties point to *potential* difficulties in the world and anxiety itself can inhibit action through its emotivational escape goal. Acting without emotions 'behind one' can be difficult and wise decision-makers need to assess the accuracy of these emotions and plan for how to recruit emotions to their side.

Tasks for the use of emotions as fallible resources in acting:
- Use emotions to identify and prepare for possible setbacks and difficulties.
- Use the experience and expectation of positive emotions and the threat of negative emotions to motivate.

Stage 6. Reviewing the effectiveness of the choice

Stage 6 of a past decision is very similar to stage 1 of a new decision and thus the same advice applies. As emotions evaluate how decision are faring they monitor the choice - negative emotions can key us into its failures and positive into its successes. A danger is distortions by magical transformations that bias by transforming an actual poor outcome into a perceived good outcome.

Tasks for the use of emotions as fallible resources in reviewing:

- Use emotions to review and monitor the outcome, being aware of the possibility of emotions' magical transformations that protect self-esteem while distorting understanding.

The table below summarises the model.

Table 38: An Emotion-Enabled Structured Decision-Making Model

Stage and Goal	Central Tasks	Emotions Can Help Or Hinder As…	Use Emotions Wisely By…
Situation and decision-problem Goal: fair-minded understanding of situation and clarification of decision-to-be-made	Check and expand understanding of the situation Clarify what the decision-problem is about	Help - Call to need for a decision by showing important concerns are at stake - Provide initial understanding (appraisal) of the situation and decision-to-be-made - Motivate a careful decision process Hinder - Danger of narrowness, inaccuracy and distortion in emotions' judgments - Rush to action or delay choice	Recognise emotions point to decision needs, and that important values are at stake so care should be taken in the decision process. Identify the range of emotions experienced and the intentionality of these emotions about the situation and decision-to-be-made Clarify and challenge assumptions within these emotions' appraisals Seek a state of emotional evenness for the decision process
Values Goal: set of important values at stake	Identify candidate values Assess, group and weigh these values	Help - Indicate candidate values Hinder - Promote unenlightened values - Lead to fluctuations in valuing	Use emotions to identify possible (candidate) values implicit within emotions Check whether on reflection these values are enlightened and embraced Be aware that emotions can be unstable making different values stand out at different times depending upon the emotion being experienced – seek a 'bird's eye' view
Options Goal: set of credible options	Use values to suggest options Brainstorm Explore options	Help - Suggest candidate options Hinder - Through emotional colouring (associations) options seem better or	Use emotions' 'action tendencies' to identify possible options Be aware of how past emotional experience might lead to some options seeming better or worse

		worse than they are	than reflection might otherwise suggest
Choice Goal: selecting option most likely to realise important values	Evaluate options with values Think win-win to modify options to better capture important values	Help - Test of decision and decision process Hinder - motivate hasty decision making or excessive procrastination - myopic analysis (single-minded, poor planning)	Identify emotions about the prospective choice (uncomfortableness?, anxiety?) and the decision-making process (pride?, shame?) to determine whether further work is needed Identify and argue against emotions pushing to haste or procrastination Recognise need to integrate values and not rely on single, possibly dominant, emotion's appraisals
Action Goal: Carrying out choice	Identify potential difficulties and plan how to carry out decision Use follow-up activities to negotiate the minefield of realising a decision	Help - Identify possible barriers (anxieties) - Encourage action (pride, shame) Hinder - Becoming disheartened by difficulties	Use anxieties about carrying out the decision to identify possible barriers and plan how to get around these Motivate to action through recognising pride in decision or shame in failing to carry it out Recognise that setbacks are disheartening and plan to cope
Review Goal: monitoring if values realised	Assess whether the decision is working (are enlightened values realised)	Help - Evaluate success Hinder - Danger of bias in assessing outcomes	Test success by examining emotions (e.g. happiness, despondency) Beware of emotional strategy of wish-fulfilment

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Notes:

[i] See also the previous chapter where these quotations are discussed.

[ii] See the previous chapter.

[iii] This is a truly wild speculation about Nussbaum for which this author has no warrant. The point is that such a use of grief is possible, whether relevant or not in this case.

[iv] This pattern of brain damage, lack of emotional experience and dysfunctional behaviour is suggestive that emotions are required for wise decision-making but is not definitive. The brain damage that impaired Elliot and the other patients might have damaged parts of the brain responsible for both making wise decisions and experiencing emotions.

[v] This can only be part of an explanation of emotions impact on decision making. While these brain-damaged patients are in danger of spending too long mulling over a relatively trivial decision, this analysis ignores the long periods of reflection people often engage in for serious decisions where having emotions does not seem to terminate the decision process, but to prolong it. Damasio's account also seems to have trouble explaining the intentional differences between emotions.

[vi] Damasio seems here to equate reason (or at least high reason) with calculation – an unnecessarily narrow account of reason (see chapter two), and hence not a comprehensive set of alternatives for how to choose.

[vii] This writer does not have a series of scenarios that flit before his mind when making decisions - rather sadly instead a tendency to ruminate obsessively on certain features to the exclusion of a wider range of considerations. Damasio provides no evidence for the claim that flitting scenarios is usual. Perhaps they are unconscious – or is this an 'ad hoc' device to save the theory from the possibility of refutation (Popper, 1972)?

[viii] Although he tends to focus on the negative cases Damasio also points out that gut feelings can inform us "Go for it!" (*ibid*, p 180)

[ix] That monetary income cannot be fit on the friendship scale, and vice versa, does not imply, though, that decision-makers cannot compare. Griffin (1986) denies the "strong incommensurability" of two values in which "the one is neither greater than, nor less than and not equal to the other" and so "cannot be fitted onto *any* scale of measurement" (emp original, p 77). He points out, for example, that freedom from pain and accomplishment can be compared: "If the pain is great enough and the accomplishment slight enough, we should not consider the accomplishment worth the pain" (ibid, p 80). Incommensurability needs to be distinguished from indifference. Buridan's ass was caught between two equally enticing bails of hay so the ass's problem was *indifference*. The ass could have solved this problem by tossing a coin, bearing in mind that not eating at all is an inferior choice to randomly plumping for either equally good bail. If the two bales are identical in every way except that one has much more than the other the choice is easy. Elster points out that indifference is a "knife-edge property, rarely observed in nontrivial real-life situations" (1999, p 288); more common is the 'zone of indifference' where differences between options are practically insignificant and choosing either is equally good (Klein, 2003). Two

difficulties for decision-makers are (i) recognizing they are in the zone of indifference and (ii) believing they need some tie-breaking, or distinctive feature (a student of the writer told that she would get stuck in the supermarket trying to choose between near identical containers of strawberries (see also Redelmeier and Shafir, 1995)).

[x] An advantage for Elliot over 'normals' would be not suffering the additional costs of the emotional frustrations involved in carrying out such a calculation.

[xi] Elster claims that somatic marker theory is a type of reinforcement theory and as such is unlikely to guide the businessman well: "For reinforcement to establish behaviour, it should ideally occur soon after the behaviour in question, occur invariably when the behavior is chosen, and the behaviour itself should be one that is chosen frequently". This is perhaps too narrow a view of conditioning theory which can include one trial learning. Exactly what is conditioned is a further difficulty – past experiences can easily be inappropriately emotionally coloured, when for example a fear of a dentist's waiting room is conditioned through associations with the pain of the visit. Gut responses can also be flawed in their assessment of the seriousness or the likelihood of the outcomes. Let us suppose that it is *likely* that the businessman will be seen by his friend with his client - whether the *seriousness* of the implications to his friendship are accurate is still left open to question. Furthermore if previous bad experience were the only way to avoid poor choices experience would be a very dear (expensive) teacher indeed as Franklin pointed out.

CHAPTER SIX: Researching the Model

Chapter Contents

1. Methodology: What to investigate

The aim of this research is to develop and test a normative-pragmatic procedure for decision making, integrating the use of emotion within a structured, divide and conquer, model.

1.1 Development and testing of the procedure

The development of the emotion-enabled procedure has been carried out by:

i) A **theoretical review** of the emotion, decision making and related literatures to initially develop the procedure.

ii) A **semi open-ended exploration** of the use of the procedure, to suggest possible improvements. This was based on an action-research methodology (Lewin, 1948; Dick, 2002) where the author, with several colleagues, tried out successive versions of the procedure on themselves and volunteers, adapting the procedure as seemed to fit their experience of what was helpful and what wasn't.

How can a putatively normative-pragmatic procedure be tested? This methodology section will first analyse controversies around decision-making research, and then explore methodologies that can be used to evaluate effectiveness. The form that this current piece of research will take within this broader analysis will be laid out.

1.2 Outcome and process measures

Crucial to investigating the success of a putatively normative-pragmatic decision-making model is determining what and how to investigate (Frisch and Clemen, 1994; Fischhoff, 1980). The two possibilities are decision-outcomes and process-outcomes. It is possible to distinguish between the 'process' of a decision, and its 'process-outcomes' and the 'decision' (or 'choice' to use the terminology from chapter one) and the 'decision-outcome'. Suppose a person is trying to decide what career to choose. The 'decision' is the career chosen and the 'decision-outcome' is how well this works out. The 'process' is how the decision-maker goes about choosing and the 'process-outcomes' are those changes in how the decision-maker thinks about the decision, such as changes to their understanding of their situation, what they value and their 'live' options.

It is plausible to suppose that a particular 'process' produces particular 'process-outcomes' which in turn produce changes in the 'decision', and consequently the 'decision-outcome'. For example a choice cannot be of an option that the decision-maker has not thought of (Hammond, Raiffa and Keeney, 1999), and this 'process-outcome' (the identification of an option) depends upon the 'process' used (how the decision-maker searches for options).

So 'decision-outcomes' are the outcomes realised from the choice and 'process-outcomes' are the changes in understanding realised through the decision-making process. Both have their strengths and limitations as measures of normative-pragmatic procedures.

Outcome Measures

a) Why outcome measures

The strength of looking at decision-outcomes is that the purpose of a decision-making procedure is to produce good outcomes (the realisation of what is valuable); what decision-makers should care about is the outcomes of their decision making, so they would not be well advised to follow a putatively normative-pragmatic procedure that consistently led to poor outcomes.

b) Validity threats to using decision-outcome measures

There are four major threats to using decision-outcomes as a measure of the success of a normative-pragmatic procedure.

1. Other factors may intervene. Other factors may intervene between the time a decision is made and the assessment of the outcomes from the decision making. March writes that, "If you judge only by the success of the decision, you will often credit as great decision-makers people who happen to be in the right place at the right time, and for whom external factors fall into place conveniently…In a world in which outcomes are not certain it is often true that an intelligent decision turns out badly. It is intelligent to carry an umbrella on a day that a reliable weather forecast predicts rain. The intelligence of the decision is not changed by the fortuitous event that on a particular day it did not, in fact, rain" (March, 1979, cited in Mitchell and Krumbolz, 1984, p 250). An additional problem is specifying when a decision is made. Sartre analyses the case of the gambler who has decided to quit gambling because of its negative effects on his finances and family life. However he finds as he approaches the gambling tables that his resolution does not stand behind him as the "real barrier" to gambling he had hoped, but that he must continually remake his decision (1943/2003, pp 56-57).

Given these problems it is hard to know whether outcomes, good or bad, are the result of the procedure or intervening factors.

2. When should outcomes be evaluated and what should be evaluated? When is it possible to say that a decision has turned out well or badly? The consequences of a decision continue indefinitely into the future, and what seemed, in outcome terms, like a bad decision at one time, can appear to be a good one later (and vice versa). For example a decision to chose a particular career, because it promises a certain level of income, will by evaluated differently depending upon the market conditions currently prevailing.

Our decisions also have spreading effects, like the stone thrown into the pond. If a person chooses a career for its income but it also turns out that it suits a later desire to care for

(unpredicted) children which outcomes should be used in assessing the original decision - those that were expected might occur, good and bad, or those that are ripples?

As well as objective changes to the outcome of a decision over longer periods of time, the subjective assessment of the desirability of the outcome can fluctuate in the short-term, depending, for example, on our current mood (Clark and Williamson, 1989). Following a bad day at work the assessment of career choice might be very different than after a good day.

3. *Problems of bias in assessing outcomes*. Given a human desire to think decisions have been made wisely and that life is going well decision-makers are predisposed to bias judgements about (i) how the decision was made (wisely) and (ii) the outcomes of the decision (beneficial). Festinger's (1964) cognitive dissonance theory, for example, proposes that in order to reduce the 'cognitive dissonance' between the perception of oneself as competent and poor outcomes to decisions, decision-makers might bolster the chosen alternative by focusing on its beneficial aspects and the rejected options' negative aspects. In this way decision-makers can maintain their self-perception as competent, but at the expense of a fair assessment of the success of decisions (see also Chapter 4, section 5.4).

4. *What is a 'good' outcome?* If a decision-making procedure is to be judged by its production of good outcomes how is the 'goodness' of outcomes to be judged? Is this judgement to be made by the decision-maker or others, and according to what philosophical account of values?

A further issue is the 'goodness' of the outcome needs to be weighed against the costs of reaching it as the process of making a decision uses the valuable generic resources of time and effort. A decision that realised only trivial values but used up considerable resources of time and effort is not a good decision.

c) Laboratory-type/analogue studies as a possible solution to the threats
One solution to these threats is to carry out laboratory-type/analogue research. For example Nezu and D'Zurilla carried out a series of studies in which participants were trained in problem-solving techniques and presented with decision-problems to see if particular tasks led

to better solutions (Nezu and D'Zurilla, 1979, 1981a, 1981b; D'Zurilla and Nezu, 1980). Another approach is to focus on aspects of decision making considered to be biased to test the efficacy of 'debiasing' tasks (Fischhoff, 1982; Larrick, 2007). The use of the controlled laboratory experiment within psychological research on decision making has been the dominant research mode, although this approach has not been without its critics (e.g. Galotti, 2002; Klein, 2003).

d) An assessment of laboratory-type/analogue studies
Using the controlled laboratory experiment the four threats to assessing outcomes are avoided: in these studies as nothing is really taking place nothing can intervene; as nothing is really taking place nothing changes so any time is as good as any other for assessing effectiveness; a good outcome is determined 'objectively' by, for example, expert judges or Bayes' theorem; and bias is avoided as the decision-maker does not themselves assess the outcome of their decision.

While providing some evidence for the effective use of a normative-pragmatic model in the real world there are three major disanalogies between these studies and the real world that make this kind of methodology of partial value for research investigating the effectiveness of a putatively normative-pragmatic decision-making procedure. Laboratory- type and analogue decisions are:

a) Too Simple/Trivial. Real-world decisions are more complex than the limited worlds of the controlled experiment. Real-world decisions cannot be, as Galotti points out "neatly typed and handed over to the decision maker" (2002, p x); instead situations, values, options and the likely outcomes to these options are often unclear and ambiguous, and a vital part in deciding is finding clarity about these aspects of the decision. Making a related point, Orasanu and Connolly (1993) point out decisions in laboratory studies are not related to other decisions and the participants' experience of making decisions over their life.

b) Have no need for action. Real-world decisions have to be acted upon, so part of a successful process is one that leads decision-makers to want to act. Generating a sense of resolution and

commitment is needed for real-life decisions, not for laboratory-type and analogue decisions. The lack of real-world consequences also means the decision making can be taken less seriously.

c) Are not emotional (enough). Laboratory-type/analogue decisions fail to generate the range or depth of emotions found in real-life decisions as these decisions lack the personal history, engagement and sense of responsibility that generate the emotionality of real-life decisions[i].

Given these disanologies there is a trade-off involved in research into a putatively normative-pragmatic decision-making procedure. While the control of extraneous variables in the laboratory-type/ analogue study can increase certainty that the outcomes are caused by the procedure, it also decreases certainty that what is found will apply outside the unreal world of the study. Without denying that these studies can suggest and test hypotheses there is clearly also merit in Janis's Aristotelian complaint[ii] that "Research psychologists who give the highest priority to attaining methodological rigor by confining themselves to meticulous laboratory experiments are likely to exceed other experts in learning more and more about less and less. All too often *rigor methodologicus* is the terminal stage before *rigor mortis*." (1982, p 15[iii])

d) Re-assessing the threats
If laboratory/analogue studies have these disadvantages, can the threats to decision-outcome measures be ameliorated?

1. Other factors may intervene.
a) Have they? Have other factors intervened, and if so what impact have they had? If no other factors have intervened and the decision has turned out poorly, this suggests that there was something lacking with the normative-pragmatic procedure.
b) Could intervening factors have been predicted? Could these intervening factors have been predicted? If they were readily predictable and the decision-making method failed to identify them this is a limitation with the normative-pragmatic procedure.
c) Was the decision and decision-maker flexible to changing circumstances? Given that individuals and the world changes, decision-makers can be fairly sure that they will need to

adapt their decisions as other factors intervene. Did the normative-pragmatic procedure allow for changes within the decision-maker and the external world, encouraging flexibility in decision and decision-maker[iv]?

d) Comparative studies. In a comparative study intervening factors will, given a large enough sample, be equivalent across groups (see the studies by Nutt: 1999, 2005, 2007, 2008).

2. When should outcomes be assessed and what should be assessed?

a) Not too soon and not too late (an Aristotelian mean). When to assess depends upon what time scope the decision was meant to encompass. A decision about what to have for lunch should be evaluated during and at a short period after lunch. A decision about which career to pursue should (ideally, but perhaps impractically) be evaluated over the course of a career. With increasing time from the decision making more and more factors are likely to intervene, leading both to unpredictable consequences to the initial decision, and changes to the decision, making it harder to assess the relationship between the outcome and the decision-making process. Given these two problems a minimum time frame is that it is unwise to evaluate the outcomes of the decision before the decision has been able to take effect, and a maximum time frame is that there should not have been such a period that other factors are likely to have swamped the effects of the decision. These have to be judged for the individual decision.

b) Unpredictable outcomes not attributable to decision-making model. Unpredictable outcomes, whether good or bad, should not be credited to the decision-making model.

c) Assessments in a representative mood. Given that evaluations can change through short-term fluctuations in mood, decision-makers should be asked to assess their decisions when they believe themselves to be in representative frame of mind, or alerted to their mood as a way to discount its impact (Schwarz and Clore, 1983), or asked detailed questions so that the temptation to use mood as summative information is weakened, or by taking many soundings over a period of time and different moods and averaging them.

3. Problems of bias in assessing outcomes.

a) Bias across treatments. It is possible that people are more biased to represent their self-made decisions as acceptable than those made with the help of a decision procedure as in the second case other-blame rather than self-blame is easier. Such a bias might act as a counter to the tendency of participants to want to appear grateful for the 'help' they have received. Decision-makers might favourably assess decisions made according to their theory of how to make decisions[v]. Problems of bias apply to all decisions so in a comparative study all interventions, including a waiting list control, are subject to bias. In any event people are not hopelessly biased as they do sometimes regret their choices and how they made them. If not people would never change their decisions, or their way of making decisions, which they clearly do.

b) Direct attention. Bias can come about through an unwillingness to examine the evidence carefully enough (Kunda 1990, 1999), a limitation that can be ameliorated by:

    i)   Directing the decision-makers' attention to areas of relevant concern to illuminate the darker recesses of their blind spots.

    ii)   Requiring decision-makers to justify their assessments with reasons by, for example, revisiting a list of values identified in the decision-making process and asking for objective assessments, with explanations, of how well each value is actually realised in the outcome.

    iii)   Investigating decision-makers' emotions about the outcomes to counter rationalizations. While decision-makers might say that the outcome is good, emotions such as regret, disappointment, guilt and resentment can tell a different story.

    iv)   Seeking a wide range of evidence about the outcomes of decisions to see if errors and regrets 'seep out'.

    v)   Cross checking with others assessments of the success of decisions, and any independent objective evidence available.

4. What counts as a 'good' outcome[vi]

Given that the threats to linking outcomes to a decision can be ameliorated what outcomes can be measured? In some research an external, objective measure of good can be used. Janis in his

research of the Special Procedures used measures such as attendance at an exercise class (1982b). Omer and Dar (2007) compared the effectiveness of a decision-making protocol based on Janis' theory with a 'strategic counselling' protocol by using questionnaires to measure the intensity of the dilemma before and after (example item: ''I keep wavering about the decision I have to make,'') and changes on a Mental Health Inventory containing items relating to positive and negative mental symptoms. These studies had researcher-determined variables (which are assumptions of what are valuable decision outcomes) that could be objectively measured; respectively amount attended, amount earned and mental health. A limitation with these kind of measures is that what is valuable in making complex decisions is variable across participants, and part of what is to be decided. There are other possible solutions. Drawing upon the analysis of a decision from chapter two, and in order of increasing significance they are:

a) A good decision is one that the decision-maker considers to have been worth the time and effort of making. Time and energy are limited commodities so a decision that is made using up less time and energy, is better than one that uses more. If the decision-maker considers the time and energy to have been well spent this is some indication that it has been so, especially if the decision-maker can point to gains from this investment.

b) A good decision is one in which the decision-maker believes their conflicts to have been acceptably resolved. A sense of resolution is a good outcome because:
i) Without a sense of resolution it is difficult for a decision-maker to act, or to act consistently.
ii) A sense of resolution is likely to come through prioritising values and finding a satisfactory option to realise these values[vii].

c) A good decision is one upon which the decision maker acts. A good outcome cannot occur without action so a normative-pragmatic procedure needs to enable not just choosing but also acting on the choice; a procedure that fails to motivate fails.

d) A good decision is one that the decision maker is satisfied with. A common method is to use global measures of success, and various psychometric measures of decision satisfaction and

regret have been devised[viii]. A qualitative approach (using open-ended questionnaires/interviews) can investigate the intentionality of decision-makers' satisfaction and regret to provide more depth - i.e. what the decision-makers' satisfactions and regrets are about[ix].

e) A good outcome is one that realises (enlightened) values. While outcome 5 above uses global measures, more specific information can also be obtained by investigating whether particular values have been realised. Two important questions are:

a) Were previously identified values realised? To the extent that a decision realises the values a decision-maker recognised as important when they made their decision then the decision is a good one.

b) Are previously identified values still considered valuable? If the decision-maker believes that what they had previously identified as valuable turned out not to be valued by them, then the decision is a poor decision.

This assessment can be done quantitatively through numerically scaled measures, and qualitatively by open-ended questionnaires and interviews[x].

Process Measures

a) The Process Perspective

A good decision, according to a process perspective, is one that is made a particular way – by, among other things, clarifying values, generating alternatives and choosing based on important values. On this account, a normative-pragmatic procedure can be assessed by how well it enables the clarification of values, the generation of options and the selection of the best available choice.

b) Researching Process-Outcomes

Drawing upon the analysis of a decision from chapter two as consisting of a situation and decision-problem, values, options, a choice, acting and review[xi] there are process-outcomes for each of these components. For each of these it is possible to research the effectiveness of a normative-pragmatic procedure in producing these different process-outcomes.

A normative-pragmatic procedure should be effective at helping the decision-maker[xii]:

    i)   Understand their situation and clarify the nature of their decision-problem

    ii)   Identify what matters - important values and objectives - at stake in the decision

    iii)   Generate credible options[xiii]

    iv)   Choose the best available option

    v)   Act on the basis of the choice

    vi)   Review and modify the choice, where applicable

Given that, it is argued, emotions permeate the decision-making process, it is also to be expected that a normative-pragmatic procedure should be effective at helping the decision-maker

    vii)   Deal with the emotional side of decision making.

c) Researching the Process Outcomes

Process outcomes can be researched by:

    i)   Quantitative (how many) and qualitative (in what way) analysis of changes before and after intervention, using pre-session questionnaire/interview, session record and post-session and follow-up interview/questionnaire.

    ii)   Tracing changes to 'signed causes' (HSCED see below) in the session record.

    iii)   The participant's assessment of what helped or hindered them.

2. Research methodologies: how to investigate

A variety of different research methodologies can be employed to deal with the complexities of researching normative-pragmatic decision-making procedures to provide tests that are both meaningful and fair. Aristotle's methodological advice (Aristotle, 350 BC/1980, 1094b13), to seek the level of precision the subject matter is capable of providing (neither more nor less) should be followed.

2.1 Three methodologies: RCT, HSCED and Action Research

Research Methodology 1: The Random Controlled Trial (RCT)

The strength of the RCT approach is that it provides a measure of how well one form of intervention does *overall* against other interventions and controls. There are a number of different decision-making models in the literature, and the procedure developed in this research could be compared for effectiveness against these other models.

The purpose of these interventions is to compare global variables (the type of intervention used) on a range of different measures. A waiting list control can be used to control for changes to measures of decision-making success that occur without the planned interventions, as a function of time.

Due to the complexities involved in the realisation of a RCT (the large numbers of participants required, and the use of different decision consultants expert with different procedures), and the early stage in the development of this procedure, this study will not employ this methodology.

Research Methodology 2: The Hermeneutic Single-Case Efficacy Design (HSCED)

a) Limitations with the RCT
While the use of the RCT has become the dominant methodology for researching the

effectiveness of interventions in the counselling and vocational fields these approaches have not been without their critics (e.g. Bohart, O'Hara and Leitner, 1998; Elliot, 2001)

The RCT treats the intervention itself as a 'black box'. What is examined is changes to variables before and after, with the assumption being that if the intervention is tightly enough controlled then whatever is in the black box accounts for the change. However, such an assumption is limited in the information it provides given the complexities of real-world research. Elliot writes that RCTs investigating the effectiveness of different forms of therapy are "causally empty" as they "provide no method for truly understanding the specific nature of the causal relationship" (2001, 316). This is a more extreme position than this author wishes to take, although there are limitations to what the RCT can show:

i)   As decision-making interventions are complex occurrences, even if an intervention is shown to be generally causally efficacious exactly what about it that helped is left opaque. This is because the RCT provides no resources to explore this beyond the forlorn attempt to control all possible variables, and all possible interactions between these variables, and deduce from this what were the causes. This is forlorn because (a) the number of possible variables and interactions is simply too great and (b) it is a mistake to think that the control of these variables is always a good thing (given that people and their decision difficulties differ flexibility is a virtue).

ii)   As cases differ, and interventions are complex, what is causally efficacious for one person might differ from what is causally efficacious for another.

Given these two problems the RCT provides a general, but blurry, assessment of the effectiveness of different procedures. This difficulty is recognised by Omer and Dar in their recent research of decision-making effectiveness. Although their RCT study sought to compare the use of a protocol based around Janis's Balance Sheet procedure with a less-structured approach designed to unfreeze paralysis they write "The results of the present study raise some questions of interpretation. Because the present study was primarily an outcome study, we cannot ascertain whether indeed the decision counseling helped by promoting a rational

decision and whether the strategic counseling helped by releasing paralysis. It is even possible that strategic counseling helped by enhancing participants' capacity to effect a better evaluation of the alternatives or, conversely, that decision counseling helped by creating movement by encouraging the participants to search for information" (2007, p 610).

b) The HSCED Alternative

Elliot (2001, 2002) advocates as an alternative to the RCT the Hermeneutic Single-Case Efficacy Design (HSCED). Drawing upon the work of Cook and Campbell (1979) and Schon (1983) Elliot notes that rich contextual information can provide evidence for 'signed causes'. A 'signed cause' is a cause that leaves a tell-tale imprint in its effects. For example, "if a bumper-shaped dent with white paint in it appears in your new car after you have left it in your parking lot, then the general nature of the causal agent can be readily inferred, even if the offending vehicle has long since left the scene" (2001, p 315). This is still a kind of black box account - the causal picture is clearer still if you observe the accident. The causal accounts provided by many academic disciplines (e.g. history, geography, literature), and used in everyday life (including what goes on in the law courts following car accidents), are based upon a search for signed causes.

The use of the HSCED requires "detective work"[xiv]. In detective work "available evidence is weighed carefully and contradictory evidence is sought so as to test emerging possible alternative explanations" (2001, p 318). Elliot suggests different ways to collect evidence, which are adapted to the present study, and listed below[xv]:

Table 39: Sources of Evidence for the HSCED

Source of Evidence	How Collected
Quantitative and qualitative outcome measures	Pre, post and follow-up questionnaires providing quantitative and qualitative evidence for decision-outcome and process-outcome changes.
Quantitative and qualitative information about significant change events	Post-session and follow-up questionnaires asking how much the procedure and different elements of it helped and hindered and why they helped or hindered
Direct information about the process, and signed causes	Recording of the session and its analysis

Elliot also lists "explanatory threats" – alternative explanations of changes - and how to evaluate them. Again the most relevant, adapted for this study, are listed below:

Table 40: Other possible explanations and how to evaluate them

Explanatory Threat	How Evaluated
The "hello-goodbye" artifact – emphasise distress at start, improvement at end.	Participant recruited as co-researcher, with honesty encouraged. Look for convincing detail, not global and vague positive descriptions.
Improvements by other causes – Outside events/Other help/Self-generated improvement.	Evaluate duration of decision dilemma. Ask participants to identify other help, and assess its impact. Analyse whether changes would have occurred without the intervention.
Non-improvement /deterioration	Check for deterioration as well as improvement. Evaluate the importance of changes.

The data collected will be both quantitative and qualitative. Different methodologies have been advanced for analysing qualitative data. Shared by these methodologies is a search for themes within the data (Braun and Clarke, 2006).

c) Thematic Analysis

Braun and Clarke (2006) advocate the following steps in thematic analysis:

1) Gaining familiarity with the data through immersion

2) Generating initial codes, in a systematic fashion across the whole data set

3) Searching for themes by collating data

4) Reviewing themes by checking the themes against the coded data and the entire data set

5) Defining and naming themes through ongoing analysis and generating clear definitions

6) Producing the report by selecting vivid and compelling extracts and relating these back to the research questions

For this research steps 2 and 3 can be modified, as themes are largely pre-identified by the analysis of process and decision outcomes.

Although this research design is called the Hermeneutic *Single-Case* Efficacy Design, this research project will use it to analyse ten cases to start to build up a generalised picture of the effectiveness of the procedure and the different elements within it.

Research Methodology 3: The Action-Research Process

Action research (Dick, 2002) is an appropriate methodology because:

1. Despite its common-sense appeal, and its theoretical justification, as the review of the literature shows there has been very little research carried out into how to integrate emotion into a normative-pragmatic structured decision-making model (or into normative-pragmatic decision making). Given this a semi open-ended exploratory search is appropriate to develop the specifics of the integrated model. This exploration can lead to fruitful changes to the model, which can then be further explored in the action-research cycle.

2. Given the complexity of decision making simple processes that only manipulate a few variables are unlikely to be illuminating. So it is difficult to advance by the use of RCT alone.

3. The co-researcher participants are active collaborators in the process and can interpret and critique the process they take part in. It is assumed they are able to comment insightfully on how useful they found a process to help them make decisions, point to possible flaws and suggest new elements.

2.2 A defence of the mixed methodology

Integrating Action Research, Random Controlled Trial, and Hermeneutic Methodologies
The use of action-research, the random controlled trial (RCT) and Hermeneutic Single-Case
Efficacy Design (HSCED) methodologies can appear to be contradictory. This is not so
because of three distinctions:

    i)   Exploration and testing
    ii)   Global and local variables
    iii)   Many versus a few cases

i) Exploration and Testing. As a broad generalisation the action-research methodology aims to
develop the method and RCT and HSCED to test the model once it is developed. This,
however, is to assume that the model has reached a final developed form. In reality the RCT
and HSCED tests a model that has reached a certain stage of development that can be further
elaborated and modified depending upon the findings from these methodologies.

ii) Global and Local Variables. Global variables are theorised to be at the level of the whole
procedure. The RCT tests the models at the global level. Local variables are particular tasks
within the procedure. Variables at the local level, such as how best to help participants to
identify, explore and assess their emotions for different aspects of decision making (e.g.
understanding the situation, clarifying values, dealing with barriers etc) are best approached
through the action-research and HSCED methodologies.

iii) Many Versus a Few Cases. RCT requires many cases in order to be able to apply measures
of statistical significance. The greater depth of exploration required by the action-research and
HSCED methodologies can only realistically be effectively carried out for a few cases.

Inference to the Best Explanation (IBE): the overarching theory
More broadly these methodologies fit within the theory of inference to the best explanation,
where explanations are compared to see which best explains the data. In IBE a hypothesis (H)

is developed, from which are deduced empirical predictions. These predictions are investigated to determine whether the hypothesis is supported (Hughes, 1996, Ennis 1996). The probability of H being supported depends upon:

a) The number and range of observation statements confirmed and disconfirmed
b) How well other possible explanations of these observations are ruled out
c) Whether H is consistent with other acceptable theory

The literature review and action-research is used to generate H (the procedure hypothesised to aid decision making), and the predictions are tested through the observation statements generated by RCT and HSCED. Validity tests and detective work are used to check for alternative explanations using both confirming and disconfirming evidence. Disconfirming observations are not treated as conclusively refuting H (the procedure) but rather as providing a possible source of improvements to the procedure. If, after many action-research cycles that seek to adapt the procedure, many disconfirming observations still persist the attempt to build a model integrating emotion into a normative-pragmatic, structured decision-making model would be, in Lakatos' terminology (1970), a degenerating research program.

3. The Procedure

3.1 Delivery of the intervention through Decision Coaching

Why Decision Coaching?

Two possible routes could be used to test the procedure; either by providing participants by training participants in the procedure, and letting them work through a pro-forma on their own or by coaching them through the procedure.

The second of these options was taken for the following reasons:

1. To ensure that the procedure as developed was used rather than a misunderstood or altered version.
2. To enable some flexibility in the delivery of the procedure to suit individuals and their decisions, based on the coaches 'know-how'.
3. To enable the participant to concentrate on their decision, rather than the procedure.

This last reason is explained by Perkins; discussing the teaching of thinking skills, he writes, "[a] freshly acquired frame [thinking skill] of any complexity will occupy considerable space in working memory…When putting the frame to work the learner must laboriously remember what the frame says to do and do it piecemeal with great attention. At the same time, the learner must also hold the problem to which the frame is being applied" (1987, p 49).

This difficulty of holding both the frame and the problem in mind at the same time is an argument for "decision coaching" (Russo and Schoemaker, 2002) or "decision counselling" (Janis and Mann, 1977); this is especially so when strong emotions are involved, as these emotions tend to colonise mental space pushing out other considerations.

The coach can manage the frame, allowing the decision-maker the mental space to deal with the content – this provides a logical division of labour and roles, with the 'coach' expert in the

process managing the frame, while the decision-maker, concentrates on the content, an area in which they are the authority.

The Decision Coaches

The author provided decision coaching to eight out of the ten participants, a colleague provided decision coaching to one participant by email, and the author and the colleague provided joint decision coaching to one participant.

3.2 The Intervention

The decision-making session or sessions

Participants attended from one to three sessions, with each session lasting between one to three hours. The sessions ended when the procedure had been worked through. This took different lengths of time depending upon the decision and the participant. For some participants the sessions were spread out over several months. In a few cases there was short email communication after the sessions finished[xvi].

On using a pro-forma to guide the process

The procedure consists of a set of stages, with goals and tasks to work through based upon the emotion-enabled structured decision-making model. The procedure was followed by using a pro-forma on a computer which was collaboratively worked on by the participant and decision consultant, who sat side-by-side looking at the computer screen. In some cases the participants were encouraged to work on the tasks between sessions as 'homework'. The particular tasks used was dependent upon the 'flow' of the process, and what seemed appropriate; all the stages and the emotion-enabled tasks were followed for all the participants.

A record of the outcome of the tasks was recorded on the pro-forma, normally in a table format. For example:

- emotions explored about the situation the decision maker was facing were recorded thus:

Emotion	About	Strength	Appropriate?

- emotions of admiration, envy, and feeling-sorry-for, explored to identify values and possible options were recorded thus:

Person I admire/envy/ feel-sorry-for	What I admire/envy/feel-sorry-for about them	Values implicit in envy/admiration/feeling-sorry-for

- information required for investigating situation and options were recorded thus:

Question	Action Plan	Answer

- the choice table collated the participant's analysis thus:

	Options Objectives/Values (weight)	Option 1	Option 2	Option 3	etc
weight	Objectives/Values 1	Does option capture value?	Does option capture value?	Does option capture value?	Does option capture value?
weight	etc	Does option capture value?	Does option capture value?	Does option capture value?	Does option capture value?

There were three purposes to using the pro-forma:

1. To guide the process ensuring that all the participants received a similar intervention, while also allowing some flexibility to the focus.
2. To provide a record of the session that could be used to analyse the effectiveness of the intervention.
3. To provide the participant with a record of how they analysed their decision dilemma for current and future reflection and action.

This pro-forma was a guide rather than a straightjacket – it was deviated from when participants raised other concerns, or when they dialogue jumped between stages. Far more was said in the sessions than it was possible to record[xvii]. The pro-forma is included in the appendix[xviii].

Carrying out the intervention
The pre-session questionnaire provided many questions designed to elicit from participants their analysis of the decision facing them; these questions included asking them to write about

the situation they were facing, what their objectives/desires/goals/values were, what they were trying to decide about, the options they were considering and their pros and cons, and the concerns and worries they had over the decision. As well as providing some 'before' information to contrast with the 'after' intervention questionnaires these questions were used as the starting point within the sessions for when these different aspects of the decision were explored. The question on concerns and worries was particularly 'mined' for clues to emotions that the participants were experiencing about their decision.

The procedure followed the analysis of the components of a decision developed in chapter two and three, with emotion-enabled tasks from the analysis of emotions in chapters four and five. The stages and main tasks are listed below and summarised in the table.

Stage 1. Understanding the situation and clarifying the decision-problem
In the first – 'initial overview' – phase, participants were asked to state the decision-problem they wanted to work on, list some options that had occurred to them and provide background to the situation they found themselves in. Questions of clarification were asked.

In the second – 'working on your emotions' – phase, participants emotions about their situation and decision-problem were explored. The phase was used to identify the range of emotions participants were experiencing about their decision-problem, what these emotions were about (their intentionality), how 'strong' these emotions were, and to assess the appropriateness of the emotion – did the participants believe on reflection that their emotions were providing reliable insight into their situation and values and motivating them to appropriate action? These emotions were identified in a variety of ways: for example many arose in the initial description, in the concerns identified in the pre-session questionnaire, through talking about other emotions and through directly asking if the participant was aware of any other emotions.

In the third - 'taking stock of the situation' - phase, in the light of the examination of emotions, participants critically reviewed their description of their situation, and their framing of the decision-problem and identified any further information needed.

Stage 2. Determining what matters (the values and objectives at stake)

In the first – 'initial thoughts' – phase, participants were asked to jot down the objectives that came initially to mind, and a quick test of this list was made by checking whether participants were excited by this list. In building this list a distinction was drawn between what matters in the outcome of the decision (what should the decision achieve) and what matters in the process of making the decision (how should the decision be made).

In the second – 'creatively thinking up other things that matter' - phase a range of different questions were used to trigger reflection about candidate values at stake in the decision. For example "what would you like to experience in your working life?" to identify experiential values, "what impact would you like to have on the world?" to identify values connected to states of the world, and "what sort of person would you like to be in your job?" to tap character values. Participants were also asked to indentify others they admired, were envious of, or felt-sorry-for and these emotions explored for possible values, and options, relevant to the decision-problem.

In the third – 'thinking more about what really matters most' - phase participants were helped to structure their values and objectives into 'families' and to specify which of the values and objectives they considered to be most important to the decision-problem.

Throughout all three phases participants were encouraged to relate and cross-reference these values to the emotions identified during stage one (for example, 'you listed as a value that you wish to act within your competence, does this relate to your experience of frustration and anger when you had to do x'), and the emotions previously identified were also 'mined' to suggest further candidate values (for example, 'you mentioned that you felt proud about your accomplishment at work of…does this pride suggest anything else you value?'). Emotions were also used to identify process values – what they implied about how to make the decision (for example, 'what does your anxiety about making a good decision suggest about how to go about making the decision?').

Stage 3. Generating possible options and understanding the consequences

Participants were encouraged to think widely ('brainstorm') about the possible options, using their values and objectives as a guide, including 'being wild' to encourage flexibility, and where relevant to use other sources to find out more options and search for information about the consequences of their options.

Stage 4. Choosing

In the first - 'create your Choice Table' – phase, participants built an options and values table with their favoured options and most important values and objectives. In the second - 'Use your Choice Table to make your decision' **-** phase participants were encouraged, following the table column by column or row by row, to rigorously examine and note how well the different options met their identified values. Participants were encouraged to mould their options through 'win-win' thinking to better capture their values and objectives (for example 'this option does well for values a, b, and c, but less well on d, and e, so could this option be modified so that it would better capture d and e?'). Once this was done participants were encouraged to stand back to see if they could identify which option (or set of options) to select as their choice.

Stage 5. Implementing the decision

In the final stage participants were encouraged to identify how to implement their choice by considering what follow-up activities could help, and what obstacles might prevent the action and how they could be overcome. In this stage, participants' emotions were revisited in order to identify if these emotions suggested any possible obstacles and clues to their resolution (for example, 'you identified that you were anxious that your boss would be disappointed if you did x, how might it be possible to best approach your boss's possible disappointment?').

Table 41: A brief summary of the intervention

Stage	Tasks
1. Understanding the situation and clarifying the decision-problem	a) Initial overview i) What decision do you want to work on ii) Name some options that you've already thought of iii) Describe your situation b) Working on your emotions i) What do you feel about the situation? (emotion, about, strength, appropriate?) c) Taking stock of the situation i) Check your description of the situation ii) What is the decision you would most like to work on now? iii) Do you need further information?
2. Determining what matters (values and objectives at stake)	Throughout the stage consider emotions from stage one for their implications for values at stake a) Initial thoughts i) Jot down your objectives ii) Do you feel excited by this list? iii) What matters in making the decision? b) Creatively thinking up other things that matter i) Imagine a working perfect day. ii) Use your emotions as a source of values (admiration, envy, feeling-sorry-for) iii) What would you like to experience in your working life? iv) What impact would you like to have on the world? v) What do you think a good and well-informed friend would advise you? vi) What do you advise a good friend placed in a similar position? vii) What *sort of person* would you like to be in your job? viii) Thinking about the other parties involved (if relevant) c) Thinking more about what really matters most i) Look back from the end of your life. ii) Your most important objectives
3. Generating possible options and understanding the consequences	i) Use your objectives to generate options ii) Be wild! iii) Use information sources to find other options iv) Describe your options
4. Choosing	a) Create your Choice Table i) Select likely options ii) Add your most important objectives b) Use your Choice Table to make your decision i) Work out how well each option captures your objectives ii) Think win-win to generate combined options
5. Implementing the decision	Throughout the stage consider emotions from earlier stages for insight into difficulties implementing the decision i) What follow-up activities would help this solution work? ii) Possible obstacles and how can they be overcome

3.3 The Questionnaires

Data was collected through:

1. Pre-session questionnaire
2. Post session questionnaire
3. Follow up questionnaire

Both qualitative and quantitative measures were used of:

- Decision outcomes – How does the decision turn out?
- Process outcomes – What are the outcomes of the process of making the decision (e.g. changes to understanding)?

These questionnaires are summarised below and included in the appendices.

Data was also collected through a record of the sessions.

1. The Pre-Session Questionnaire

This pre-session questionnaire served two functions. First, it provided a measure of the participants' starting point against which any decision-making help could be judged. Second, it provided the material that the decision-making sessions began from. Participants filled in a pre-session questionnaire which consisted of four sections, which mixed open-ended and Likert-type questions.

Section One: About You

This collected biographical information on age and sex as well as contact details.

Section Two: Your Difficulties Making This Decision

After being asked what decision they wanted to make the topics covered included how long the decision had been hanging over the participant, how much time they spent thinking about it, and how hard they were finding the decision.

How much time would you estimate you have spent thinking and worrying about this decision? I think about it: [ ] throughout every day [ ] at least once a day [ ] at least once a week [ ] less than once a week [ ] very rarely   In total how many hours would you estimate you have spent thinking and worrying about this decision? I have spent:

Section Three: About Your Decision. Section three was designed to elicit more information about the decision and consisted of questions about different aspects of the decision the participant found themselves facing. These questions mapped onto the theory about what a decision consisted of, so included the participant's situation, their values and goals, their worries and concerns, and the options they were considering. This section also asked participants what they would choose now if they had to, how confident they would be in this choice, and why they would have this level of confidence.

If you had to choose right now what would you choose and why?
I would choose to…
Because…

How confident would you be in this choice?
[ ] Completely, [ ] Very, [ ] Moderately, [ ] A little, [ ] Not at all
Why would you have this level of confidence?

…

Section Four: About The Questionnaire

This section asked participants to comment on the questionnaire, evaluate whether filling in the questionnaire had helped in any way, and state how long filling in the questionnaire had taken.

2. *The Post-Session Questionnaire*

The post-session questionnaire was emailed to participants immediately after the session[xix].
The questionnaire consisted of a mixture of Likert-type questions, open-ended questions asking the participant to explain their answers to the Likert-type questions, and other open-ended questions.

Section One: About Your Decision

This section asked participants whether they had come to a decision; if they had what it was, and how confident they were in the decision, and if they hadn't whether they thought they were better placed to make a decision or not.

Have you come to a decision? Yes/No
If yes what is it?
…
The level of confidence I have in this decision is:
[ ] Complete, [   ] A lot, [ ] Some, [ ] A little, [ ] None at all
Why do you have this level of confidence?
…

Section Two: Your Analysis of the Progress Procedure

This section asked participants to provide overall analysis of whether they thought the decision-making sessions had helped or hindered, what they thought were key moments in the sessions, and whether the sessions helped with the particular components to the decision making such as understanding the situation, identifying values, finding options, choosing and acting.

Overall I think Progress helped me in my decision making:
[ ] Very much, [ ] A lot, [ ] Somewhat, [ ] A little, [ ] Not at all
What do you think were the key moments/insights/questions/events in the session that helped you?

Key moment/insight/question/event	How it helped
1	

Progress helped me deal with the emotional side of making the decision:
[ ] Very much, [ ] A lot, [ ] Somewhat, [ ] A little, [ ] Not at all
Please explain your answer:
…
Do you think that Progress hindered you in any way in your decision making?
…

These questions focused on:

1. Whether the participant believed they had come to a decision and if so how confident they felt about their decision.

2. Whether they thought the decision-making sessions had helped or hindered, and if so in what way.

3. How they compared the decision-making sessions to other forms of help they had received for this decision.

The purposes of the post-session questionnaire were to:

1. Provide a measure of the extent to which, from the perspective of just having undergone it, the participants found the process helpful.

2. Identify how the procedure could be improved.

3. The Follow-Up Questionnaire

The follow-up questionnaire was emailed to participants at least six months after the session. The questionnaire consisted of Lickert-type questions, open-ended questions asking the participant to explain their answers to the Lickert-type questions, and other open-ended questions.

Section One: About Your Decision

This section asked participants whether they had carried out the decision from the decision-making sessions, and if not why not? Participants were asked to state how satisfied they were with their decision and whether they had any regrets.

How satisfied are you with the decision? [ ] Completely, [ ] A lot, [ ] Somewhat, [ ] A little, [ ] Not at all Please explain your answer.	
I am this satisfied with my decision because…	
1	
2	

Section Two: Your Assessment of the Progress Procedure

This section asked participants to assess the usefulness of the decision-making sessions. Questions asked for both general assessments and for participants' assessments of the help for the different components of the decision (understanding their situation, emotions, values, options and acting on their decision)

These questions focused on participants' assessment of:

- What decision they had actually taken and how they thought it had worked out[xx].

- The effectiveness of the decision-making procedure and what they thought it had missed.

The purposes of the post-session questionnaire were to:

1. Determine whether participants had thought that their decision had worked out, and whether the decision-making sessions had failed to identify any crucial factors that might have been identified (and if so how).

2. Provide a measure of the extent to which, from the perspective of distance, the participants found the process helpful.

3. Identify how the procedure could be improved.

4. The Participants and Their Decisions

About the participants

There were ten participants, three male and seven female. They ranged in age from 20 to 55 with six in the age bracket of 30-39. The participants were recruited through personal contacts or by answering a request for participants placed upon a website. Five participants were students on a psychology evening course. All participants who indicated that they wished help in making a decision were accepted onto the study. No participant dropped out of the study.

The participants' decisions

The kind of decision that the participants wanted to make was not specified in recruitment although all had decision-problems related to their work and career. The participants were considering either wide-ranging changes to the direction of their career, changes within their work situation or whether to follow particular courses of study. Some had decisions that were tightly formulated with specific options under consideration – for example: *"There are two connected ones. One, whether I should go back to full-time work next year. Two, whether it is teaching maths I should do"*. Others decisions were presented as more open-ended, such as *"What job I'm going to be doing next"*.

The participants as co-researchers

During the research participants were encouraged to act as co-researchers. They were told that the purpose of the sessions was to assess the effectiveness of the procedure (as well as to help them with their decisions) and their suggestions for how it might be improved were encouraged and welcomed. The questionnaires asked the participants to answer the questions as "accurately, fully and candidly as possible" that "What is most helpful to us is your honest and candid feedback, not you telling us what you think we would like to hear!" and by stating that "The Progress Research Project thank you for your honesty and co-operation". This message was also emphasised in the email communication when participants were sent the questionnaires. It is hoped that this was sufficient to counter-act the tendency of participants to say the sessions were helpful even if they thought they weren't out of gratitude, embarrassment, or kindness.

5. Ethical Issues

Informed Consent: Participants were informed that they were taking part in a study to investigate the effectiveness of a decision-making model that is under development.

The Right to Withdraw: Participants were informed that they could withdraw at any time from the research, and psychological pressure to encourage them to continue would be avoided.

Protection of the Participant: There is possible harm to participants as they might be led to make unwise decisions as a result of the intervention. This is mitigated as:

    i)   Participants are already finding making the decision difficult, otherwise they are not part of the study. There is no *a priori* reason to believe that the research provides greater risk than consulting friends and other informal advisors as people normally do when they are struggling with a difficult choice. There is possible benefit in that the interventions might help them to make wiser decisions.

    ii)   There is no requirement that participants do not use other sources of help in their decision making (indeed part of the process can be encouraging them to do so).

    iii)   Participants are free to ignore whatever comes out of the decision-making process – and their taking the role of co-researchers in the assessment of a 'work in progress' can provide them with a critical distance from it.

    iv)   If participants believe that their decision making has not improved or deteriorated, or should they want it for whatever reason, other sources of support can be suggested.

Confidentiality of Data: Identifying material will be prevented from reaching the public arena.

Notes:

[i] This is not to deny the effectiveness and findings of research designs that put participants into particular emotional states, in order to investigate the consequences of these states, rather to point out the this is different from the complex of emotions that come along with real-world decisions. Solomon argues that emotions are connected to our engagement with the world (Solomon, 2004) and Calhoun that they are tied to our personal history (Calhoun, 2004). All existentialist philosophers have emphasised the anguish we experience when confronted with the freedom and responsibility implicit in our choosing (e.g. Sartre 1943, 1948).

[ii] Aristotle (350 BC/1980, 1094b13) argued that research should seek the level of precision the subject matter is capable of.

[iii] See also Hammond (2000) for similar concerns about researching the impact of stress.

[iv] The 'positive uncertainty' of Gelatt (Gelatt, 1989; Gelatt and Gelatt, 1991).

[v] So someone who thinks that decisions are best made intuitively might be biased to assess decisions made this way more favourably than those made as part of a more 'rational' process, and vice versa. Klein (2003) makes a similar argument.

[vi] This account draws upon the theory of wise decision making presented in chapter two.

[vii] The Values Conflict Resolution Assessment (VCRA) can be used to measure the effectiveness of a normative-pragmatic procedure in producing a sense of resolution (Kinnier 1985, 1995, 2000). The VCRA compares the decision-maker's degree of resolution before and after an intervention. Before the intervention the decision-maker:

Identifies their conflict, attempts to resolve their conflict as best they can and evaluates their written resolution according to standardised questions. After the intervention phases b) and c) are repeated. The standardised scores in c) provide a measure of resolution. The standardised scores are designed to measure 'Ethical-Emotional Resolution' – e.g. "To what extent would you experience feelings of guilt if you actually carried out this resolution" – and 'Rational-Behavioral Resolution' – e.g. "To what extent has your actual behaviour during the past two months been consistent with this resolution".

viii Outcome studies focusing on general measures of success, satisfaction and adjustment at work have been criticised by Fineman (1993) as (i) these are global appraisals which obscure the richness of feelings and (ii) are more properly construed as attitudes about work, rather than experiences of work. The solution to this is to combine global measures, to provide 'thin' data that is easily captured and compared across decision-makers, with in-depth qualitative research into the intentionality of the emotions to obtain 'thick' data.

[ix] There is a possible drawback. The more fully values are identified the more opportunity there is for regret if they all can't be satisfied. Regret in this case will only be minimised if the person also manages to acquire the emotional state of acceptance of the incompatibility of values.

[x] These approaches are not antagonistic. If the decision-maker identified work-life balance as an important value a quantitative scale can provide a simple measure of the extent the believe this value to have been realised and qualitative research can investigate in what way this value has been realised.

[xi] See the analysis of a decision, from which the predictions are derived

[xii] These different aspects of a decision follow from the analysis of what a decision is, provided in the literature review.

[xiii] The study of option generation focuses on two variables, the number of options identified and the quality of the options identified. The quality of an option is its capacity to satisfy important values at stake in the decision. Quality is more important as options need to be credible (a long list of worthless options is no help, and a possible hindrance through overload), although generating a large quantity might lead to increasing the number of credible options.

[xiv] Another term for this is that 'critical thinking' should be used to evaluate different possible explanations. There is an enormous literature on the epistemological basis of critical thinking (for example an early an influential text is Ennis (1996) - Ennis illustrates critical thinking skills to evaluate causal explanations for a crime within a law court).

[xv] In most therapy research there are fairly obvious accounts of what counts as getting better – for example are negative emotions experienced less, although there are disputes too about whether what matters is insight, increased functioning, and so on. The section on Outcomes and Process measures explore what ideally should be investigated for assessing the effectiveness of decision-making interventions.

[xvi] For one participant all communication was by email.

[xvii] For the first participant the data was not recorded on a computer during the sessions (rather on paper).

[xviii] There was some development of this proforma over the sessions to improve its usefulness and intelligibility to participants. The basic structure remained constant.

[xix] The time taken to send them back in varied considerably partly undermining the aim of getting a snap-shot of what participants thought immediately after the sessions. This could be overcome by either (i) providing a deadline and emphasising the need for speed, or (ii) getting participants to fill in the questionnaire before they left.

[xx] This proved to be a more problematic area than anticipated. Some of the decisions were too long term to have been fully instigated or come to fruition within the time frame. Also there was a grey area over the issue of whether participants had followed or changed their decision. Some of the decisions participants made slightly deviated from their choice in the sessions but how wide did this deviation have to be for it to be different choice? In addition there is the problematic issue of changing circumstances leading to the wisdom of changing the decision – this can be investigated by asking participants if there have been any relevant and important changes to their circumstances.

CHAPTER SEVEN: Results

Chapter Contents

1. Analysis of the Data

Introduction

In the methodology section it was argued that the effectiveness of a decision-making procedure could be evaluated in terms of decision outcomes and process outcomes using the following criteria[i]:

Decision outcomes were:

i)   A good decision is one that the decision-maker considers to have been worth the time and effort of making.

ii)   A good decision is one in which the decision-maker believes their conflicts have been acceptably resolved.

iii)   A good decision is one upon which the decision maker acts.

iv)   A good decision is one that has outcomes the decision maker is satisfied with.

v)   A good decision is one that has outcomes that realise the decision-maker's enlightened values.

Process outcomes were:

i)   A good procedure has been generally helpful.

ii)   A good procedure has helped with specific aspects of making a decision including:
   a) Understanding the situation and clarifying the decision-problem
   b) Understanding what matters (values and objectives)
   c) Choosing an option
   d) Dealing with the emotional side

What evidence is there for the effectiveness of the procedure tested against these criteria?

1.1 Decision outcomes

i) A good decision is one that the decision-maker considers to have been worth the time and effort of making

a) Time invested in the decision before the sessions

These were decisions that participants described in the pre-session questionnaire as having been hanging over them for a considerable time. The longest reported 'time hanging' was five years, and the shortest three to four months, with the average about one and a half years. More in depth analysis of these decisions showed that the history to these decisions was often much longer. For example, the participant who reported that the decision had been hanging over her for three to four months had been unhappy in her work situation for nearly a decade and had tried many different solutions, all of which had proved unsatisfactory to her.

These were decisions that weighed heavily on the participants' minds. Asked how often they thought about their decision all the participants who answered the question reported that they either thought about their decision throughout the day (3/8) or at least once a day (5/8). Asked to estimate how many hours they had spent thinking about their decision those who responded reported:

- I have spent: 5 times a day, every day for the last 5 years! I'll let you do the maths!
- Well, if it's at least once a day (one hour in total per se), then that's 365 hours at least throughout one year.
- 900 hours
- 91 hours (10-20 mins/day for a year)
- 3650 hours

This is an average of 2,826 estimated hours per decision. If the highest and lowest outliers are eliminated the average time is 1,638 estimated hours. Clearly there is a certain amount of 'guestimating' about these times, but these estimates illustrate the extent to which the decisions were perceived as dominating the participants' thoughts.

Asked to say how hard they found the decision the participants replied[ii]:

Impossible	Very hard	Hard	Ok	Fairly Easy
1	1	6	1	0

The participant who described the decision as 'okay' also indicated that she had spent 900 hours thinking about her decision.

b) Participants' comments on time and effort

There was no question specifically designed to answer this question; nevertheless five participants chose to comment specifically on this question, in response to questions about the overall helpfulness of the procedure, whether it hindered them in any ways or comparing the procedure to others forms of assistance they had received. All indicated they thought it was worth the time and effort due to the amount that they gained from it.

Some judged this by the importance of the decision they were facing and the time and effort this decision deserved and what they got out of it:

- "Its length and intensity helps one take important life decisions very seriously and give them the consideration they deserve…I can carry out the decision with more confidence now as the process has been so rigorous that I feel I have spent more time thinking about my reasons for leaving my job than my colleagues have thought about their reasons for staying!"

- The procedure "is time consuming. This is fine if, as in my case, it is critical and I have the time to do so…It is an extremely valuable tool for people who have to make some big decisions. Career is an obvious one. For me it was even more useful because of other unique factors (eg. illness). It is however, time intensive and involves much work and soul-searching on behalf of the client. It cannot be taken lightly."

- "It was worth every ounce of the effort as I was lost and stuck in a role which I didn't like"

Others by a comparison with other possible forms of help:

- "My overall assessment of Progress – certainly very helpful for me – could possibly short cut hours and hours of counselling!…[An advantage of the procedure was being] "able to debate the decision in this way for a long time – nearly 3 hours"

Or by the time it would have taken without the sessions:

- "It has helped me in coming to a decision quicker…it required a lot of my time but then again I'm not sure this was a hindrance as the big bonus, which is the invaluable knowledge that Progress gave me, far outweighed this and so made up for the use of my time 10 times over."

Set against an average of 2,826 estimated hours, the sessions, which took from three to nine hours with additional outside 'homework', seem quite short, and judged by these comments, and participants' general perception of helpfulness (see below) largely worth this time investment.

ii) A good decision is one in which the decision-maker believes their conflicts to have been acceptably resolved

Evidence for this can be found by considering whether participants managed to come to a decision (after their average of 1,638 estimated hours of worry) and how confident they were in this decision.

a) Did the participants come to a decision?

In the post-session questionnaire eight responded yes, one wrote partly (*"I have come closer to a decision"),* and one *"sort of"* (not explained but this participant was waiting on feedback for an application to study a course).

b) How confident were the participants in their decision?

Participants were asked in the pre-session questionnaire to state what decision they would make if they "had to choose right now" and state how confident they would be in this decision. After the session they were asked what they had decided to do and how confident they were in this choice. All - except one - participants' answers indicated that their levels of confidence had increased after the sessions; this increase in confidence was statistically significant (Wilcoxon signed ranks test, $Z = 2.577$, $p < 0.005$ for directional test and $p < 0.01$ for non-directional test).

Changes in confidence levels before and after the session	Level of confidence				
	complete	a lot	some	a little	none at all
Before sessions	-	3	7	-	-
After sessions	6	6	-	-	-

What of the one participant who expressed the same level of confidence in his choice before and after the sessions? Before the sessions he identified his favoured choice as *"hold my horses a bit and ... go for an intellectual and social rewarding job in a friendly environment"*. He expressed himself as very confidence in this choice. By the end of the sessions he had articulated his values, explored options and started on a more definite path which he was also very confident in. It is perhaps easy to feel confident in a decision that is as open-ended as 'find a job I like', much less hard to feel confident in the decision to pursue a particular path. The participant believed the sessions had helped him to develop stronger foundations for his decision making:

"I feel my decision making is more founded now. I feel there is less chance of my decision being the result of an unbalanced view. In other words, as this decision-making project took into account the whole spectrum on which a decision should be based, it allowed me to look at my emotions as well as my values, weight them and then match them against my options. (I think this approach/technique is brilliant!) And these strong foundations have now inspired me with more confidence, have reduced my wavering and have strengthened my views and convictions."

Another participant specifically commented on the unexpected resolution of her difficulties:

"I didn't come to the Progress interview with high expectations because I thought the issues (around my current work situation and what I should do about it) were too convoluted and complicated for me to be able to come to a decision and expected that I would end up rather in the hands of fate and not make a clear, decision but I ended up making a decision which was satisfactory both to my need to sort things out in my present job and my desire to move on to new challenges where I could put my past experience to good use rather than undersell myself in a bid to escape from an uncomfortable situation"
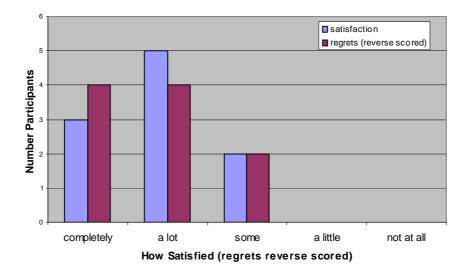
iii) A good decision is one upon which the decision-maker acts

In the follow-up questionnaire all the participants indicated that they acted on the basis of the decisions they made during or immediately following their sessions. Seven participants seemed

to be following the decision exactly and three had modified it somewhat. Of those who modified the decision one switched to her favoured backup option after her initial choice failed, one found unexpected success in an option she was about to abandon and integrated this into her overall plan, and one modified her route into her chosen career, an alteration she attributed to the sinking in of issues raised in the session and becoming more aware of financial implications as she sought to realise the choice.

iv) A good decision is one that has outcomes the decision-maker is satisfied with

Two questions were designed to measure the decision-maker's attitudes to the outcome: a question asking how satisfied they were with their decision, and another whether they had any regrets.

Participants' Assessment of Decision Outcomes

Summing the answer to these two questions (with regret reversed scored)[iii] and performing a chi square reveals these results to be statistically significant ($X^2 = 19.5$, df = 4, $p < 0.005$). This Chi Square analysis assumes that all categories are *a priori* equally likely but this is perhaps psychologically unrealistic due to a tendency to avoid the lower categories (e.g. Festinger, 1964). A more stringent test is to group the data into two categories:

i)   Satisfied: the 'completely' and 'a lot' answers

ii)   Doubts about satisfied: the 'some', 'a little' and 'not at all' answers.

Performing a Chi Square analysis on this data still shows a significant effect ($X^2 = 9.8$, df $= 1$, p < 0.005)

A limitation with this analysis is that at follow-up many of the participant's were still working towards realising their decisions, so the levels of satisfaction are best read as levels of satisfaction so far[iv].

v) A good decision is one that has outcomes that realise the decision-maker's enlightened values

This limitation of decisions still underway also applies to the assessment of the realisation of the decision-maker's enlightened values. Some data is available in the form of the explanations that participants provided to explain their levels of satisfaction and regret, where these explanations are linked to the values they are seeking the decision to realise. This data is drawn upon in the next chapter where some of the individual participants' decisions are analysed in much greater detail.

A further limitation was the questionnaire format of the research; participants' responses to the question about their satisfaction and regret did not explicitly review their values and how well each value was being satisfied, and whether they still identified with their list of values. This topic requires an in-depth interview at follow-up to explore what participants now consider to be their enlightened values and how well these are being realised through the decision they made.
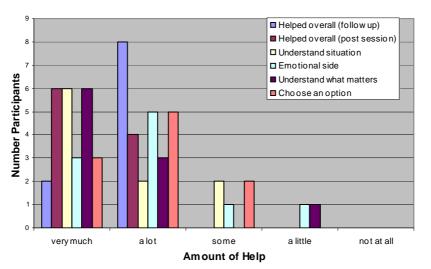
1.2 Process outcomes

i) A good procedure has been generally helpful

This criteria was investigated by asking whether the process had been helpful for this particular decision, and also by asking whether the process would be likely to be helpful for other decisions; this second approach is based on the assumption that if participants have doubts about the process they are less likely to believe they will use it again or that others will benefit from its use.

a) Generally helpful for this decision?

In the post session questionnaire participants were asked to assess to what extent they found the procedure to be generally helpful, and how helpful they found the procedure to be for dealing with particular aspects of their decision: understanding their situation; understanding what matters (their values, objectives and goals); choosing an option; and the emotional side. In the follow-up questionnaire they were asked to assess, looking back, how useful they had found the procedure. The chart below provides a summary of this information.

Participants' Assessment of Help Provided

The statistical significance of this data was analysed by performing a Chi Square test on the individual questions, and the overall pattern with the answers to all the questions summed. For

each question two Chi Square test were performed. The first with the data kept in the original five categories, with an expected value of 2 for each category (10 participants divided by 5 categories), assuming that *a priori* an answer in any category is equally likely. The second test was based on the more stringent assumption that participants use only the top two levels (the 'very much' and 'a lot' answers) if they believed the process has appreciably helped them. On the basis of this assumption the data was summed into two overarching categories:

i)   Definitely helped: the 'very much' and 'a lot' answers

ii)   Uncertain whether helped: the 'some', 'a little' and 'not at all' answers.

The expected value used for the Chi Square test for this division of the data was 5 (10 participants divided equally into 2 categories).

This data is summarised in the table below. All ten participants rated that the procedure had helped 'very much' or 'a lot' in both the post-session and follow-up questionnaire. All the tests were significant at $p < 0.05$ or higher except 'helped with the emotional side', 'helped choose an option' and 'helped understand what matters' (significant for five categories but not two). Those tests which did not reach significance at $p < .05$ displayed data in a very similar pattern to the tests which yielded statistical significant and with $p < 0.1$ were approaching the $p < 0.05$ significance.

For participants' assessment of overall help there was a slight decrease in the scores for "Helped overall (post session)" to "Helped overall (at follow up)", with four participants changing their assessment from helped "very much" to helped "a lot". This difference was not statistically significant (Wilcoxon Signed Ranks Test, $Z = 0.31$).

Table 42: Summary of data on how much participants said the process helped with their decision

		The process helped:					Five categories (EV= 2, df = 4)	Two categories (EV = 5 df = 1)
		very much	a lot	some	a little	not at all		
Questions about what the process helped	Helped overall (at follow up)	2	8	0	0	0	$X^2 = 24$ p<0.005	$X^2 = 10$ p<0.005
	Helped overall (post session)	6	4	0	0	0	$X^2 = 16$ p<0.005	$X^2 = 10$ p<0.005
	Helped understand situation	6	2	2	0	0	$X^2 = 12$ p<0.025	$X^2 = 3.6$ p<0.1
	Helped with emotional side	3	5	1	1	0	$X^2 = 8$ p< 0.1	$X^2 = 3.6$ p<0.1
	Helped understand what matters	6	3	0	1	0	$X^2 = 13$ p<0.025	$X^2 = 6.4$ p<0.025
	Helped choose an option	3	5	2	0	0	$X^2 = 9$ p<0.1	$X^2 = 3.6$ p<0.1
	All data summed	26	27	5	2	0	$X^2 = 59.46$ EV = 12 p<0.005	$X^2 = 35.26$ EV = 30 p<0.005

Participants provided very varied answers when asked to explain their assessment of why they found the process generally helpful. Some opted simply to reiterate their measure of helpfulness in qualitative form - for example writing "*I found it useful at a difficult time in my life*". The most enthusiastic when asked for her overall assessment wrote "*FANTASTIC*", if her decision making was hindered in any way she replied "*NO! It was a godsend!*", if she had any suggestions for improvement she replied "*I know it sounds cheesy, but I really think it was brilliant and don't have any criticisim! It came at exactly the right time in my life and was more helpful than I thought it could ever be. I am SO grateful! I would recommend it to anyone!*" and if she had any other feedback she offered, "*BRILLIANT, FANTASTIC, EXCELLENT, WOW!*" (upper-case in the original).

At follow-up she had cooled a little, rating that the process had helped 'a lot' rather than 'very much' and explained her changing evaluation of the sessions in this way: "*It was great but my high kind of wore off when I realised I couldn't stick with my decisions 100%. Life is very complicated and changes all the time. I needed to feel ok about flexibility. I wanted Progress to*

be a miracle cure but of course life isn't that simple!" This participant also suggested the procedure should include a warning about the need to be flexible to changing circumstances – a point taken up in the discussion. Others emphasised how the process helped with particular aspects of their decision, such as clarifying their values, the emotional side, or helping them find and compare options.

Of particular interest seven out of ten participants commented on the structured nature of the process as, they believed, contributing to the helpfulness of the sessions. This is compelling evidence for the participants' assessment of the helpfulness of a structured process as there were no questions specifically on this; rather participants spontaneously chose to comment on this feature.

Participants comments on the use of a structured process

- *"Excellent. Practical, logical and helpful...a "system", taking everything into account."*
- *"It is very organized (not that it cannot improve further!), thus it promotes all factors that lead to decision making to be equally organized and weighed. It slowly and gradually leads to a great decision making...It is very useful in organizing one's thoughts and options prior to making a decision. It helped me organize my thoughts."*
- *"It was thorough and methodical...It has helped me look at things from all angles and make an informed decision"*
- *"It provides you with a step to step guide into the decision-making process It also enables you to extract and exhaust all the information necessary to make the decision"*
- *"Looking at all aspects - Things fell into place...[it provided the] Opportunity to look at the decision in a very broad prospective and under different headings"*
- *It is structured, methodical...It is balanced, extensive and innovative (it takes into account the emotions as well)...Knowing how your decision came about leaves you less room for doubts later; you understand how it all shaped up.*
- *It was lengthy and intensive. I knew I had explored many angles...I have greater confidence in making decisions now as I can be less impulsive and more rigorous.*

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b) Generally helpful for other decisions?

This question provides a cross-check on the validity of the question about whether the process was helpful as it could be argued that there is a tendency to say 'thank you' for help offered even if the 'help' received was not perceived as beneficial. The politeness tendency is reduced when asking whether the participants would use this procedure again and believe it would help others[v]. If the procedure were found useful then participants would be likely to express positive intentions to use the procedure themselves again in the future and believe that the procedure would be useful for others as well. In the follow-up questionnaire participants were asked to

rate whether:

i.   They would use the procedure, on their own or with help, for other important decisions

ii.   Other people would benefit from using the procedure in making their decisions

The chart below provides a summary of answers to these questions.

Participants' Assessment of Usefulness For Other Occasions

This data suggests that the participants believe that the procedure is likely to be helpful for other decisions both for themselves and for others. The statistical significance of this data was analysed by performing a Chi Square test on the individual questions, and the overall pattern with the answers to all the questions summed. For each question two Chi Square test were performed. The first with the data kept in the original five categories, with an expected value of 2 for each category (10 participants divided by 5 categories), assuming that *a priori* an answer in any category is equally likely. The second test was based on the more stringent assumption that participants use only the top two levels (the 'yes and 'very probably answers) if they believe the procedure is likely to be helpful for other decisions. On the basis of this assumption the data was summed into two overarching categories:

i)   Likely to help: the 'yes and 'very probably' answers

ii)   Uncertain whether will help: the 'maybe, 'probably not' and 'no' answers.

The expected value used for the Chi Square test for this division of the data was 5 (10 participants divided equally into 2 categories).

For all questions the pattern of data was significantly significant with data in the original five categories ($p < 0.005$), and when the data was summed into two categories the data approached significance ($p < 0.1$) for the individual questions and reached significance when the data for the two questions was combined ($p < 0.01$).

What of the participants who responded 'maybe'? There were three altogether. One participant responded 'maybe' to both questions on the basis that the process might not suit the temperament and style of a decision-maker who likes to make gut decisions. The second explained their 'maybe' about whether others would benefit by beginning, *"I'm sure they would"* and qualifying this on the basis that the decision-maker might not put in the commitment needed for the procedure to be effective. The third 'maybe' was in response to the question about whether the participant themselves would use the procedure again, an answer explained on the basis that she wasn't expecting to experience such a hard decision for a long time; *"In a few years' time when I've evolved a bit more and my values have shifted again it would probably be useful to re-evaluate my life once more."*

One participant commented that he was using the procedure to help a friend in their decision making, and another that she was considering doing so.

Table 43: Summary of data on how much the process would help with other decisions

Useful for other decisions?	How likely?					Five categories (EV= 2, df = 4)	Two categories (EV = 5 df = 1)
	Yes	Very probably	Maybe	Probably not	No		
Use again?	4	4	2	0	0	$X^2 = 8$ p<0.005	$X^2 = 3.6$ p<0.1
Others benefit?	6	2	2	0	0	$X^2 = 12$ p<0.005	$X^2 = 3.6$ p<0.1
Summed Data	10	6	4	0	0	$X^2 = 18$ Ev = 4 p<0.005	$X^2 = 7.2$ Ev = 8 p<0.01

A thematic analysis (Braun and Clarke, 2006) of all the participants' responses reveals two main themes used by them in providing an explanation for their ratings; beliefs about the kind of decision and beliefs about the kind of decision-maker.

a) Beliefs about the kind of decision:

Some participants expressed the belief that the procedure seemed best suited to decisions that were difficult:

- *"Hopefully I will not have such a difficult decision to make again. But if I did, I would use it to organise my thoughts."*
- *"In a few years' time when I've evolved a bit more and my values have shifted again it would probably be useful to re-evaluate my life once more."*

Others considered the procedure to be suitable for any, or a wide range of, decisions:

- *"Progress procedure is a useful decision-making tool in day to day situation, people will find it enlightening as it will enable them to explore areas: emotions and virtues, that they would have easily ignored".*
- *"Keeping in mind and making use of the basis structure of Progress, I'm sure it would help me with tackling any decision."*
- *"It helped me in finding ways to think about personal things in general, by using the same type of analysis."*

A possible synthesis of these two positions, expressed by some participants, is that ideas in the procedure are suitable for any decision, but that the guided, full procedure is more suitable for difficult and critical decisions:

- *"in most instances, I now make decisions in roughly the same way that I did before, but with more awareness of what I'm doing. However, I'm sure that if and when I have a very difficult decision to make in the future, I might well go through the procedure explicitly."*
- *"I would use the progress procedure in day to day decisions as I find it a useful compass in leading me in the right direction. For critical decisions I may seek help especially in grey areas where I have no experience and a facilitator may guide me on the right track."*
- *"The process is quite long-winded and without someone else spurring me through it I might get lazy and just give up."*

b) Beliefs about the kind of person:

One participant expressed the belief that the structured process would not suit how some people make decisions:

- *"I think it very much depends on the temperament and thinking style of the user. If the person likes to think systematically and logically, it should be very helpful."*

Other participants thought that this was exactly the kind of person who would benefit most from the procedure:

- *"People who don't tend to introspect or who don't know what their values are at all would benefit a lot from the procedure."*
- *"I think I am relatively "logical" about decision making anyway. Some people aren't and so would probably benefit even more than I did."*
- Others would benefit as *"Most people do not go through decision making in such a structured way"*

A middle position was adopted by one participant, who believed that others would benefit, but only if they had the commitment to devote the time and effort:

- *"I'm sure they would. However, it depends to what extend they would be receptive to Progress because it's important to be committed to this method in order for it to succeed, or in other words you need to commit time and effort."*

This is a factor presumably moderated by whether you believe the process fits your preferred decision-making style; if you can't see the point you don't devote the time and effort. The participant who questioned how well the procedure would suit individuals' who don't decide systematically had a slightly different take, believing that even if you did devote the time and effort you would not be committed to a decision that was not derived through a process that seemed right to you. She explained that:

- *"if the user doesn't deliberate in that kind of way [following a structured process], then the whole procedure and the outcome would seem "external" to the user. And it would be hard for the user to regard the decision made by going through that procedure as his/her own decision. (A bit similar to the "external" vs "internal" reason Bernard Williams writes about.)"*

Interestingly one participant commented that the process suited her preference for deciding through feelings and intuition rather than 'logically':

- *"I did find the interview much more revealing than the questionnaire. This may have been because it offered me the chance to talk around and about the situation and generally "sound off" a lot. I think that perhaps this is because I am the sort of person who is more comfortable with feelings and intuition than with logical argument."*

The session for this participant followed the same structured process as all the other sessions, investigating the situation, emotions, values and options, right until the last stage where a options/values matrix is used to help make the choice by explicitly comparing options against the identified values; this participant chose prior to this (*"I've come to my decision"* she said, slightly short-circuiting the procedure), so although the structured process was mostly followed there was no formal comparison of a range of favoured options to values.

One participant, who in the end abandoned her choice because of emotional difficulties[vi], stated she would use the process again and that it would definitely help others, but that it did not manage to adequately anticipate the emotional difficulties she came to experience in trying to carry out her decision:

- *"I would use it because it clarified my rational process and helped me rate my priorities. However, I now realise that irrational reactions I didn't know existed can rule rational decisions, to a degree I'd never experienced before. So next time I would use Progress for the rational bits but pay more attention to the "irrational" concerns I had before I even started. I would recognise their potential importance, and investigate them more: ways to cope with them, or perhaps a recognition that I would never cope with them!"*

ii) A good procedure has helped with specific aspects of making a decision

a) A good process has helped with understanding the situation and framing the decision
Participants were asked to assess how much the procedure had helped them to understand their situation. Six stated the process helped 'very much', two 'a lot', and two 'some', with on

answers in the little or not at all categories. This distribution was statistically significant when the data was analysed as five separate categories ($X^2 = 12$, p<0.025) and approaching significance when grouped as two overarching categories ($X^2 = 12$, p<0.1).

This question was intended to elicit comments about any changes to participants' understanding of the situation they were in and what they were seeking to decide about. However this questions' intent seemed not to have been well conveyed and the themes in participants' answers tended to focus on overarching aspects of the procedure rather than specifically on an improvements to understanding the situation and decision frame.

The two participants who rated the procedure as providing 'some' help in understanding their situation explained:

- *"I already understood the nature of my decision quite well so Progress didn't have much to do here."*
- *"Understanding my own personal feelings about the options."*

The two participants who rated the procedure as providing 'a lot' of help in understanding their situation explained:

- *"The rating of the options versus the priorities followed by a rating of the emotions and their relevance helped the understanding."*
- *"Leading me to acknowledge existence and validity of my own feelings and instincts and helping me to see how important the arguments for and against this and that REALLY were for me"*

Example of explanations in the 'very much' category included:

- *"I was already aware of the situation and my options, but they were kind of mixed up in my head. The conversation at the meeting really cleared things out for me."*
- *"I could focus on my wants and needs for once in my life, and this helped me make my decision. I stopped listening to what everyone else wanted from me. I realised that i am important, and i should do what is important for me!"*
- *"Progress helped me understand the different job roles and how they are inline with my virtues. A lot of information was collected about the situation. The advice I received, and the books recommended were very insightful."*

b) A good procedure has helped with understanding what matters

The procedure aimed to help participants articulate what they wanted to realise in their decision making. One of the strongest findings from the quantitative questions for aspects of the procedure was that the procedure helped participants in understanding 'what matters' to

them (the values, objectives and goals relevant to their decision). Six out of ten said it helped 'very much', three out of ten 'a lot' and one 'a little', with no answers in the 'some' and 'not at all' categories, a pattern that was statistically significant using Chi Square on both the original five categories and the summed two categories ($X^2 = 13$ for five categories and $X^2 = 6.4$ for both categories, $p < 0.025$ for both tests).

This perception of the particular helpfulness of the procedure with this aspect of decision making is further supported by an analysis of answers to the question, "[w]hat do you think were the key moments/insights/questions/events in the session that helped you?" where seven out of ten participants provided answers related to the exploration and clarification of their values.

Participants listed their values in the pre-session questionnaire, and these provided both a base to start from in the sessions and a comparison point for what was accomplished by the end of the sessions. All the participants developed richer lists of values through the process. The two tables below provide a before and after example from one participant; she is selected as her original list was one of the most well-developed and she described herself as someone who had already spent considerable time before the sessions thinking about her values - even so considerable elaboration of her values was accomplished.

A participants' list of values from the pre-session questionnaire:

1. *family and community (above career)*
2. *intellectual stimulation and contact with people at work*
3. *using unexplored talents (for example through teaching and therapy)*
4. *good social life and enjoying what is left of my youth*
5. *working 9-5 and being a member of my community*
6. *absorption in work/study through psychology and psychotherapy*

The same participant's list of values developed and subjectively weighted by the end of the sessions:

Importance/ 10	Values
9 ½	*Sense of belonging and sense of independence held in balance (keeping own direction) – family and community (Humane working hours, not feeling alienated from people, seeing people from different walks of life reconnecting with working class youth). Being in _ and area – a community of eccentrics, free-thinking; pursuing own goals, being authentic. Being connected to wider community, engaged in life, and this requires particular hours of week. Integrated - activities and interests pointing in the same direction (lived near work, walk get exercise, work friends part of community). Needed to survive emotionally*
8 ½	*Intellectual stimulation – think at abstract level, with others*
9	*Being able to play esp. in free time– use imagination, good social life, having my youth. Enjoying life, having fun – going out, meeting kindred spirits, building community of these people, variety (non-kindred spirits). Needed to do now but will ebb away. Hard to do Masters or have children without [first] having fun.*
7?	*Helping people be connected to themselves and others through emotionally honest – being open about things important to them, reflecting on life. Can survive without it - cf. sense of belonging. Being useful to community by being myself.*
7/8	*Social reform/change – as a communitarian, catalyst and healer. Adopting, fostering, Samaritan.*
8	*Family – inner circle of people as I don't have family of my own. Having own child or adopting or fostering – after fun. Watch out for not losing this by hedonism and careerism.*
9	*Work: Contact with people – kindred spirits - at work, being myself (sense of humour and values), Correlation between effort and remuneration/outcome, being able to have professional development*
9	*Using my talents – these are thinking, empathy, communicating, optimism, understanding why people think/behave as they do, sense of humour, wisdom from family background and solitude, varied social background (writing takes care of itself)*
	Money – minimum income 17,000 would like 20,000 after few years
8	*Personal status (self-respect) – isn't people looking up to me but rather having level of expertise (I am a something), autonomous meaning control over own professional development – developing dependant upon own needs not organisation, promoting what I care about – my values*

By analysing (Braun and Clarke, 2006) the participants' explanations of how they thought the procedure helped them with their values certain themes can be identified:

i) Participants experienced articulating their values as coming to understand themselves more fully:

- *To see what I reckon to be key objectives was an eye-opener! It was very refreshing to come face to face with your own objectives once put to paper: it felt like I got to know myself a little bit better. It is like discovering what my own values are.*
- *Made me realise the relevance of some aspects of me (eg need to have structure and balance in life)*
- *It made me think more clearly about what I want... I don't think I have ever gone through my life with such intensity before.*
- *The weighting of my own values/objectives were very enlightening.*

ii) For one participant[vii] coming to understand herself more fully took a particular form; exploring her values enabled her to come to see herself as a consistent person:

- *Creating a list of what is important to me..[helped me in] Seeing consistency in myself when I was worried that my desire to change career indicated a lack of consistency. It was useful to keep returning to the list of what really mattered to me, to keep adding to it. This meant that my core values could be boiled down in quite a reassuring way, almost as if I had created my own personal Ten Commandments!... It made me feel that I was a consistent person, which I had doubted earlier.*

iii) Participants commented specifically on the helpfulness of the idea of using their values as a guide in their decision making:

- *I do now see that if I really want to be happy in what I'm doing, I will have to pay special attention to my values. Or in other words, I will need to listen to myself more attentively.*
- *This informs you on what matter to yourself; it reminds you as to what you actually want your decision to be based on*

iv) A particular aspect of using values as a guide was participants becoming aware of how much they were influenced by others' values, distinguishing between their values and the values of significant others, and basing the decision on their own articulated values:

- *Helped me see what was important to me. Discovering what I wanted and not what other people want from me. Helped me see that I was interested in my own self actualization. I could focus on my wants and needs for once in my life, and this helped me make my decision. I stopped listening to what everyone else wanted from me.*
- *I found the concept of values very useful – it helps me to work out what the important things are for me and not allow my judgement to be clouded by what other people say or what I think they would say. That is although I still*

catch myself thinking about other people's values I am now much more aware of doing this and can bring myself back to the question of what my values are.

- *Makes me think more long-term about what I want rather than giving in to the more short-term problems of lacking money and being pressured by others or pressuring yourself.*

- *I think it was good to have confirmed that it's OK to take account of personal "quirks" in making decisions – ie there will often not be an objectively "right" answer to a particular dilemma, but there may be a "right" answer for me.*

Distinguishing one's own values from others' values did not mean that the values were simply self-centred ones; for some participants an important realisation in clarifying their values involved balancing the needs of others with more personal needs:

- *"It enabled me to weigh the value of fulfilling my ambitions and dreams on the one hand, and considering my parents' opinion and wishes on the other hand. It made me realise that I cannot cross out neither of these; which means that I need to find a good balance so as for both parties to be as pleased and happy as possible. I cannot hide though that I would not give up any of my dreams completely just for the sake of my family; I could perhaps delay it, or find an alternative way of achieving it."*

c) A good procedure has helped with choosing an option

In the post-session questionnaire, in answer to the question of whether the procedure had helped them choose an option three participants thought the procedure had helped them 'very much', five 'quite a lot' and two 'somewhat', with no answers in the 'a little' and 'not at all' categories. Analysing this data by Chi Square both as five categories ($X^2 = 8$) and two summed categories ($X^2 = 3.6$) probability was not significant ($p < 0.1$), although the general trend of the data was in line with the highly significant findings for summed overall help.

The two participants who rated the procedure as helping them choose an option 'somewhat' explained this on the basis that they were still in the process of finding out more about options, and although they hadn't chosen an option yet they had found the procedure had helped them in getting closer to choosing, and provided a method that would eventually enable them to choose.

One wrote that he was "very much" better placed to choose an option explaining that he was more confident in his decision-making process, was motivated to find out more information

about the options, and used his list of values as a way to evaluate the options he was considering:

- *"Overall, I feel the process has re-enforced my views and given me confidence in my decision-making process. It has spurred me on and encouraged me to dig for more information. It has also made me think about options I previously over-looked - perhaps the part time route, for example, is not such a bad idea right now. Every time I come across a job I am interested in and feel that I have a chance of getting I find it very useful to compare it with the questionnaire - as a "reality check". I have discovered that a career that releases some time to a) pursue a business venture b) spend time with my son and c) pursue other interests and leisure activities is by far the most important thing to me - much more than earning more money. If I could find a role that gave me this, combined with some learning and being proud of it I would be very happy."*

By the time of the post-session questionnaire this participant had selected his choice, taking a PGCE to teach business studies at 'A' Level and run his own part-time business.

The other participant explained his answer as *"I have …the foundations I can further build on…I have more or less chosen now. I just need a bit more time. I know have gone in the right direction."* By the time of the follow-up questionnaire this participant wrote, *"I feel the decision I made is solid because it is based on my values and on what lies within my possibilities."*

d) A good procedure has helped with dealing with the emotional side

This research's main aim was to investigate the integration of the use of emotions into a structured decision-making process. This section will examine the general comments that participants made about the extent to which the procedure helped them deal with the 'emotional side'. The next chapter will examine in depth the use of emotions in the decision making of particular participants.

Asked to what extent the procedure had helped with the emotional side three participants replied 'very much', five 'a lot', one 'some', one 'a little', and none 'not at all'. Analysing this data by Chi Square both as five categories ($X^2 = 8$) and two summed categories ($X^2 = 3.6$) probability was not significant ($p < 0.1$), although the general trend of the data was in line with the highly significant findings for summed overall help ($p < 0.005$).

Some of the quotations above allude to the role of emotions in the decision-making process. Starting first with the participants who found the procedure least helpful for dealing with the emotional side what explanations did the participants provide for their evaluations?

The participant who categorised the procedure as only helping 'a little' expanded on this by writing, "*[i]t generally does not deal with any psychological/emotional issues and help. It would have been nice if it could somehow stress out such points…*" and that the procedure could be improved by "*[p]erhaps more attention to psychological/emotional issues and implications involved in the decision-making process.*"

The participant explained this judgment as *"[b]ut no, I did not automatically overcome my feelings of disappointment at myself or slight despair towards the situation",* commenting that this only improved when she found a new job that was in line with her longer term goals, when she became excited and "*happy and proud of myself.*"

As a follow up this participant was asked through email to expand on her answer about the emotions:

Researcher: "Many thanks for your feedback. Can I ask a couple of questions for clarification. I especially appreciate your thoughts on emotions - can I ask you to expand? Is it that given your bad experiences in the previous year and current doubts you understandably have a range of troubling emotions and that we didn't look for ways for you to cope with these emotions? Or that because of these you were having trouble motivating yourself and it would have helped to look at motivation? Or perhaps something else?"

Participant: "It's a combination of both really; bad experiences that perhaps I still haven't got over them completely yet, plus having trouble motivating myself primarily because I feeling under pressure by parents and others' demands (e.g. to please parents' wish, or to save for dietetics, or to make the right decision for myself and my future, etc.). It's mostly a motivation issue though."

Despite this negative evaluation there was perhaps some increase in motivation to work on the decision rather than 'stewing' in the emotions as the participant also wrote that the procedure, *"[k]ind of reduced the stress, in the sense that I was motivated to work on my choices and reaching to some decisions, rather than keep thinking about the whole thing as an abstract problem and ruining my mood without any real outcome"*. It seems there might also have been

some reduction in the experience of negative emotions as the procedure *"provided me with some reassurance that yes, the pros for the decision I'm making are many more than the cons"*. This reassurance was in part achieved through use of emotions as the procedure *"helped me realise my true feelings towards options and situations."*

The participant[viii] who analysed the procedure as helping with the emotional side 'somewhat' explained this answer as, *"Making me see that there was in fact an emotional side (I'd previously seen it in a more "factual" way)"*. This participant's decision making is analysed in greater depth below where it is argued that exploring and using her emotions was a crucial part of enabling her to resolve her decision-making difficulties.

One participant who rated the procedure as helping her 'very much' with the emotional side in the post-session questionnaire came to have doubts by the follow-up questionnaire. In the post-session questionnaire the participant explained that she had a lot of confidence in her choice as:

- *"The decision process forced me to analyse my doubts instead of having vague negative feelings I didn't want to think about. It proved that rationally it is the best option. It showed me that I can do something to counteract the potential negative aspects of the decision, and also that there are many options within the decision, ie it's not a 'this is it and you're stuck forever' option."*

By the time of the follow-up questionnaire though her views changed. Now she thought that the process *"didn't force me enough to investigate the vague fears I had, which I did put into my lists but with a low rating. They've turned out to be all powerful"*.

What did the other participants make of how the 'emotional side' was dealt with? Two of the participants' responses analysed above suggested that the procedure didn't help them enough to deal with negative emotions that either undermined the realisation of the choice or that upset their peace of mind and hindered their motivation. This will be dealt with further in the discussion. While a main aim of the procedure wasn't specifically to reduce negative emotions[ix] and the questionnaires weren't specifically designed to elicit information about changes to participants' emotions, participants stated that the procedure had increased their confidence (see above). Furthermore five of the other seven participants chose to

comment on how the sessions had reduced their experience of negative emotions and increased their motivation.

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Participants comments on changes to negative emotions and levels of motivation

- *"I have started the year with renewed vigour and confidence... I now can be single minded and confident about what I want and need and what is right for me ...I feel so much calmer and happy now. I know what I want and am excitied about going and getting it! ...I feel more confident in myself. I care less what people think about me and this makes me more stable and chilled...I feel excited and positive abouit the future wherase before i felt stressed, depressed and confused!" ... The procedure "helped me feel stronger and more independent" (sic)*

- *"I had lost the will to try other careers, further education but progress restored the interest...My confidence and self esteem were rocketed to new levels...I had no drive, but progress provided me with the tools to carry out the decision, I made....Progress showed me the light at the end of the tunnel which I was unable to view...It provided me of new ways to clear hurdles to reach the tunnel end...The motivation was restored to it's full capacity...The worries, anxiety I was experienced simply dissolved away."*

- *"In a sense I came away feeling able to take charge of my destiny and in a sense capitalise on events of the past rather than being a victim of them. I was clear about my decision when I left the interview and felt relieved about having come to a decision"*

- *"The project gives special attention to emotions... This approach was very helpful...I feel my decision making is more founded now. I feel there is less chance of my decision being the result of an unbalanced view. In other words, as this decision-making project took into account the whole spectrum on which a decision should be based, it allowed me to look at my emotions as well as my values, weight them and then match them against my options. (I think this approach/technique is brilliant!) And these strong foundations have now inspired me with more confidence, have reduced my wavering and have strengthened my views and convictions."*

- *"It helped me feel more confident that I was making the right decision. I can carry out the decision with more confidence now ...It gave me confidence to make important decisions at a crucial point in my life...I think that going through what I believed made me look carefully at myself as I was having to explain myself thoroughly to another person. This created momentary self-doubt and turmoil, but I came back stronger because of it, as I then had to look at my doubts and see if my values could withstand them."*

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The procedure was specifically designed to help participants engage in wiser decision making through exploring and using their emotions. Some of the quotations above already point to the use that emotions were put in the sessions. What else did participants comment on about the use of emotions?

Three participants provided a general endorsement of the use of emotions in a structured procedure, pointing out:

- *"The project gives special attention to emotions... This approach was very helpful and I would endorse that this should form an integral part of any decision making concerned with personal matters of an individual."*
- *It's a useful and broad-based tool, as it uses the intellect, emotions and values to help decision making.*
- *The emotion, virtues and the nature of work was taken into consideration ...I am able to incorporate the emotions and values elements that I had ignored.*

The procedure sought to use participants' emotions to help them reflect upon their values. For example the emotions participants were feeling about their current situation were used to provide a route into helping participants reflect upon their values, as process identified as something that had helped:

- *"The emotions that I wrote down relating to my current position helped me of course understand how I felt about my current position but also they gave me a hint as to what you have to watch out for or have to take into consideration in choosing your next/future job."*

As part of the procedure participants were asked to think about whom they admired or felt sorry for, and identify the values underlying these emotions. Three participants commented positively on this use of emotions:

- *"It was in a way striking that the values I admire in others are the ones I later came up with as important ones for myself too. Similarly, it showed that I took note of the negative aspects others are confronted with in their jobs and that I would like to avoid those for myself (e.g. not being free/ independent enough in my job)"*
- *The procedure helped improve my understanding of values 'very much'. This help was by "Using emotions to work out my values. Looking at people I admire/envy or feel sorry for to work out my values. I guess I knew my values already but never wrote them down or analysed them so deeply."*
- *"Looking at what other people I admired... Helped me see that I was interested in my own self actualization."*

Emotions have traditionally been seen as undoing rational decision making; several participants commented on how the procedure enabled them to identify emotions that were misleading them and consequently redirect their decision making. One example of this is provided above of the participant who realised that the 'pride aspect' was undermining her choosing a good option. Other examples are:

- *"It made me see how much irrational guilt plays a part in my life and made me determined to end this".*
- *"It was important to look deeply at what was driving me. Sometimes I couldn't see the wood for the trees and this made things clearer for me, I stopped being swayed by other people's opinions and wished for me, and this helped*

make things clearer, and stopped me being so confused and hence over emotional. I feel much calmer now when I think about my life. It has brought more emotional stability to my life."

- *"I stopped feeling ashamed about not sticking at things when David suggested that my problem was having stuck TOO LONG at the same job."*

- *"It was also helpful to air my feelings of guilt when we looked at niggles as by airing them they dissipated a bit and I can see how the sense of injustice from which they spring can be used as a motivator in my career change, rather than as a reason not to do it".*

- *"I came away feeling that my emotions and values (even if not necessarily rational) had been validated... Having owned the above rather than having an inner debate about them I felt able to move forward positively...Progress enabled me to decide which of the factors which had been going through my head over the past months and confusing me were really relevant to my decision".*

- *"I did have a clear understanding of the situation already, I thought, but I didn't realise how much I was still clinging onto a job in the City".*

1.3 Assessing the explanatory threat of other help

In the methodology section the use of the Hermeneutic Single-Case Efficacy Design (HSCED) was advocated as a means to assess the effectiveness of the procedure. Evidence for the effectiveness of the procedure presented above provides justification for the claim that the procedure was on the whole helpful for most participants' decision making[x]. What though, of the possibility that changes can be better attributed to other forms of help received? While there is no definitive way to determine to what extent participants have been helped by the procedure as compared to other forms of assistance positive evidence for the impact of the procedure over and above other forms of help is:

i) The amount of time participants had been struggling with the decision before the sessions, during which they would in all likelihood have received numerous forms of help.

ii) The increases in confidence level immediately after the session as compared to before.

iii) The participants' analysis of how the procedure helped them.

iv) Tracking specific changes in participants' understanding of their decision in relation to precise events in the procedure (next chapter).

To provide a further source of evidence to evaluate the possibility of alternative explanations participants were asked in both the post-session and follow-up questionnaire to:

- Identify other sources of assistance they received and to assess the advantages of this compared to the help they received through the procedure;
- Identify the help that the procedure provided that was not provided by these other sources of help.

A thematic analysis (Braun and Clarke, 2006) of participants' answers to these questions revealed the following categories:

Three participants received career advice. Two found this helpful in terms of providing information about, and contact with, prospective employers, as well as practical help in terms of CV preparation. The other, who also talked to many people in her possible careers, found that useful in-depth information was provided about the pros and cons of these careers[xi]. Another found useful career information was collected through the internet.

For one participant the help provided by professional career advice was limited as, *"this largely centred around my previous work experience and what skills I have gained rather than looking at what really mattered to me. I have had CV writing advice. Again, perhaps jumping the gun. I needed to go much further back and think about what makes me tick."*

Another participant stated that the advantage of the decision-making procedure over the career advice was that it *"[h]elped with emotions, virtues and options"* and *"increased my thought process enormously"*, so that he could *"make a decision in line with my way of life to minimise future crisis"* and that the procedure *"[e]nabled me to be guided on the right track where everything seems to have lost meaning"*.

The other participant commented that compared to the career and specialist advice that she had received *"Progress allows one to analyse one's situation logically, whereas other forms of help usually don't have that kind of systematic approach."*

Reassurance through comparison to others

A further advantage for one participant of the career workshops was finding others in a similar difficult situation. This reassurance was also provided for one participant by talking with friends and *"[r]ealising that other people feel the way I do, even about things I'm rather ashamed of. This obviously helped the 'I'm very deficient' and 'no one else can possibly think as I do' feelings"*. Two other participants found similar reassurance through the use of media and self-help books that showed that others have *"similar problems to my own and see that these dilemmas are universal"*, although interestingly this was also taken to provide reassurance that *"there exists no one universally correct solution to any problem"*.

Four participants commented specifically on the benefits of support from others. For two participants this support was seen as an additional 'boost' to the decision-making procedure. For one participant talking to friends and family helped in increasing conviction in the choice:

- *"Talking with friends and family...[provided] just an extra and very personal boost to the things already covered in Progress - It helped enhancing my ideas and believing in myself... It makes the idea or decision more tangible, i.e. in my case it gives some more credibility to the idea of becoming a water sport instructor instead of just remaining just a vague idea. - It enhances your own belief, gives you some extra conviction."*

For the second participant this support from others helped to cement the increased sense of self-consistency that she developed through the sessions [xii]:

- *"Friends ...could see my thinking was congruent with who I had always been. It made me feel I was coming back to who I really was, rather than impulsively performing a massive deviation"*

While these two participants saw the support from others an enhancing the impact of the decision-making procedure, two other participants perceived the support they received as more or less orthogonal to that provided by the sessions. Perhaps significantly these were the two participants who, it was argued above, the sessions helped least with the emotional side of their decisions.

One participant found support in:

- *"help which progress isn't meant to give anyhow!...When I was about to quit, college provided my with other options...When I burst into tears and said I was quitting, they [school] were very supportive and told me to hang on...[and my family told me]"Hold on, Mummy, we're in with you!". "Give the horrible children bad comments, I would!" "We love you Mummy""*.

For the other participant the emotional help was less with coping with difficulties along the way, and more to do with reassurance if the decision did not work out as family and friends *"[h]elped me realise that, even if things don't work out in America, they will always be there for me back home."*

For both these participants the decision-making procedure did seem to help them see the bigger picture, so they could see what they wanted, providing them with a reason to persevere despite the difficulties:

- *[The] "Rational procedures... helps me view the bigger picture: I'm going through this for a reason. The children have agreed with this as well....The decision will still be better in the end."*
- *[as the] "Options and thoughts being organized and studied before a decision is made... I saw the pros and cons of each way out."*

Advice from close others

Three participants when asked to state what other help they had received and its advantages compared to the decision-making procedure chose to comment on advice from friends and family, but rather than delineating the advantage that this provided commented on how this was a hindrance:

- *"Advice from friends and family... Didn't! Left me more confused as everyone had their own agenda, which wasn't necessarily the best thing for me!"*
- *"Very little in relation to this decision – i.e. mainly with partner whose view was (I felt) prejudiced even though well intentioned."*
- *"They [friends and family] start from greater knowledge of "me" – although perhaps this "preconception" is a bad thing!"*

Three participants didn't see advice from close others as a hindrance, but rather lacking in the kind of detailed analysis that was carried out in the sessions:

- *"Having fresh input from the consultant (as in the brainstorming session, or in the way my answers were organised back to me) in a non-obtrusive way – friends are more personal and don't always help you to analyse things"*
- *"No (or not much) emotional involvement, so a more objective advice. I tried to view and consider things from as much of an objective point of view as possible."*
- *"D sometimes played Devil's Advocate, which my friends don't often do. I had to see whether my ideas could withstand reasonable doubts and possible problems in what I was planning to do. D challenged me... I am good at speaking convincingly even when I have doubts and some people are fooled by this."*

One participant thought that it is *"not easy for the interviewee to provide a full and objective picture of his/her character & temperament, which is relevant one's decision making"*, so advice from friends and family might help as *"friends usually know your character and temperament fairly well, hence they often can tell intuitively*

whether a certain option is good for you or not", adding the caveat that *"[b]ut then again, there are lots of personal subjectivity and even bias involved."* In relation to this decision knowledge from friends and family *"helped the initial stage of my decision making – eg getting further studies, but not much help after that"*. It was after this initial stage that this participant came to the decision-making session.

As detailed in the sections above many participants also commented on the structured nature and content of the sessions as providing help not otherwise available:

- *"The methodical structure…Firmly founds/roots the decision: knowing how your decision came about leaves you less room for doubts later; you understand how it all shaped up…[The] incorporation of emotions … helped shedding a light on how I felt about my current job…The incorporation of values informs you on what matter to yourself; it reminds you as to what you actually want your decision to be based on"*
- *"Thorough and methodical …Helped me feel confident and satisfied that I have made the right decision"*
- *"Opportunity to look at the decision in a very broad prospective and under different headings. Being able to debate the decision in this way for a long time – nearly 3 hours… More of a "system", taking everything into account".*
- *"It was lengthy and intensive I knew I had explored many angles."*

2. Analysis of the cases

2.1 Methodological introduction

The Hermeneutic Single-Case Efficacy Design includes using 'detective work' in order to uncover 'signed causes'. This chapter seeks to look inside the 'blackbox' of the intervention and to trace changes in the participants' understanding that could be reasonably attributed to what occurred within the procedure. Particular emphasis will be given to seeking to understand the 'emotional side'.

While there is inevitably a certain licence about this process, both in terms of the material selected for comment and the interpretation of this material, objectivity has been sought by:

1. Basing the analysis upon material recorded in the sessions and in the three questionnaires.

2. Repeatedly revisiting the questionnaires and categorising the responses by participants in terms of the following major categories:

   a. Process versus outcome comments

   b. Emotion versus other comments

3. Seeking an interpretation of the comments by participants that is consistent with the overall pattern of their comments, their quantitative assessment, and the material recorded in the sessions. Participants' comments are given great weight but not treated as infallible where there is alternative evidence.

4. Seeking evidence against the hypothesis that the procedure helped as well as evidence for its effectiveness.

5. Comparing the analysis across the cases to allow each case to throw interpretative light on the other cases.

6. Recognising when there does not seem adequate evidence upon which to base an interpretation. Some participants wrote far more than others in explaining their answers and for these participants the interpretation becomes more secure.

7. Producing an extended analysis (*circa* 10,000 words) of each case, from which the briefer analyses in this chapter are drawn.

2.2 Exploring emotion-enabled decision making in the cases[xiii]

The emotion-enabled decision-making diagram

The main impact of using emotions as a fallible resource and resultant emotional changes are presented in the case analyses and diagrams below. These analyses and diagrams were based on understanding gained through the process explained above.

The diagrams seek to show the causal network of some main changes in the participants' understanding of their decision. The arrows from one greyed circle to another indicate causal influence with the rectangular boxes providing more detail. One finding from the research was that participants had increased confidence in their decision after the process, and likely causal influences of this change are traced, through the emotion-enabled tasks related to the different components (the on-going situation, values-at-stake, options, choice and action) of a decision. Further explanation is provided in the text accompanying each case.

2.3 Case 1: Regina

Brief background

Regina was working in the media, and had been contemplating a career change to care work and psychotherapy, without reaching a decision.

Decision difficulty

Regina indicated that she had been thinking about this decision throughout every day for about 3-4 months and she estimated she had spent a total of 900 hours thinking about the decision. Despite this obvious immersion in the decision and her current uncertainty, asked how hard she found the decision she indicated she found the decision okay although her explanation for this revealed a mixture of factors, some of which she felt was making the decision easier, and some harder:

> - *I think my values are becoming clearer so in that sense it's easy.*
> - *I find it hard because of thinking how others will react to it.*
> - *I find it hard because it seems strange to leave a sought-after job in the media (even if unhappy there)*
> - *I find it easy because I'm used to leaving jobs - find it hard to commit to them*
> - *I find it easy because I read lots of self-help books and think I'm on the right track.*
> - *I find it hard because I have political beliefs/values that won't necessarily have an outlet in the new field.*

Summary of the participant's evaluation of the process

In the post-session questionnaire Regina judged that she had complete confidence in her choice, a choice that at follow-up she was completely satisfied with, despite a few regrets over the short-term financial implications, a sacrifice she considered worth making.

She judged at both post-session and follow-up that the procedure had helped both generally and with the emotional side a lot, commenting that "*I found it useful at a difficult time of my life.*"

What was in the procedure - in particular in relation to emotions - that seems likely to have led to these positive evaluations? The diagram below summarises the main uses of emotions and emotional changes, which are explained in more detail below.

Case 1: Emotion-enabled decision-making diagram

1. Emotions explored for understanding of self-in-situation.
(inc. dissatisfactions at work and doubts about self and change (the 'niggles'))

Accepted values:
Social reform (from guilt), and connectedness to others (from furtiveness)

Rejected values: reassessment of:
need for approval from conformity to other's values (sought after, glamorous job), and shame over how viewed by others

2. Emotions explored to help build list of enlightened values (the 'Ten Commandments')

3. Emotional change from reassessing emotions:
a) New sense of being a self-consistent person (not a 'flibbertygibbet')
b) Dissipating 'niggles' (doubt over valuing own values and guilt over what can ask from life)

Anxieties used to direct search for further information about options: e.g. anxieties about employability and costs

4. Emotions help to test and refine choice

Calmness and excitement about new direction help confirm choice.

Admiration suggests way to refine choice to meet value of social reform (NHS work)

7. Emotional change: Increased confidence in decision and decision-making process

5. Exploring other options "Settled doubts"

6. Plan for how to combat niggles (e.g. remembering reassessments of emotions and finding support)

e.g. need for approval, self doubt about embracing own values, guilt over rejecting help at work and asking a lot from life

Emotion-enabled decision making

Each of the greyed circles is explained in more detail below.

1. Emotions explored for understanding of self-in-situation

The first stage of the emotion-enabled procedure includes exploring the emotions the participant is experiencing in relation to their on-going situation and decision-problem. In Regina's case she experienced considerable dissatisfaction, even distress and depression, in her current situation, but on contemplating change experienced doubt in herself and her future prospects, doubts which she referred to as her 'niggles'.

a) Emotions about current situation

Focusing first on emotions about her situation, Regina was angry, even vengeful, towards her current managers as they had "*never found the right job for her*". She was generally angry towards her organisation as, "*despite what outsiders might think*", she believed there were systematic problems in how it was managed and felt that "*getting on*" would result in destroying her quality of life. She felt guilty though for "*not being more grateful for a job that lots of people want*" and felt furtive at work as she went in looking for family and community out of the job and in looking for this she had, she believed, deceived people.

b) Self-evaluative emotions

About herself Regina expressed self-doubt – her 'niggles' - wondering if there was something wrong with her if couldn't "*make a go*" with what she felt everybody thinks of as a "*glamorous life*", and shame from worrying about what others would think of her for changing her career. In considering change she worried if she was just being a "*flibbertygibbet again*" who lacked the staying power of sticking to things. Part of her self-doubt about change was connected to guilt about asking a lot from life, an emotion that she traced to two sources; first she had a working class background and she was doing better than other people from a similar background, and second she had already had more opportunities than people who struggle with their lot.

2. Emotions explored to help build list of enlightened values (the 'Ten Commandments')

The second stage of the procedure is building a list of enlightened values for the participant to use to assess their options, grounding their choice. Regina's negative emotions about her current role, which pointed to values that were missing, were used to help build a list of her enlightened values, such as having a *"sense of belonging and sense of independence held in balance"*, rather than having to experience furtiveness in seeking companionship from work that wasn't supplying it.

The lack of fit between Regina's enlightened values and her current work was most clearly revealed when she identified a work colleague as a person she felt sorry for. This colleague she believed always wanted the *"good middle class profession"* but was now *"stressed by the work we do, has eczema, talks about his pension…, and even if wanted to leave he would find this very difficult as he doubts his ability and was fearful of his parents' disapproval"*. The values Regina identified as implicit in this feeling sorry for were not being exploited, not getting trapped by the need for security and parental approval, and developing a vision and knowledge of oneself.

Regina rejected some of the values implicit in her emotions, particular emotions orientated to her perception of the views of others towards her – her shame about what others would think of her for changing careers again, and her need for approval expressed in conformity to values held by others (the sought after, glamorous job), but no longer by her.

Regina clearly identified very strongly with the enlightened values she specified, referring to these as her 'Ten Commandments'.

3. Emotional change from reassessing emotions

This review and analysis of her emotions about her situation and self, and the values within these emotions, seemed to lead to two main emotional changes, enabling her to move forward in her decision making

a) Regina developed a sense of being a self-consistent person.

Regina had expressed worry in stage one that her desire for change was because she was being a "*flibbertygibbet again*", by which she meant "*that my desire to change career indicated a lack of consistency.*" This self-doubt was changed through the work on building the list of enlightened values carried out in stage two of the procedure: reflecting on this aspect of the procedure Regina wrote that, "*[i]t was useful to keep returning to the list of what really mattered to me, to keep adding to it. This meant that my core values could be boiled down in quite a reassuring way, almost as if I had created my own personal Ten Commandments! It made me feel that I was a consistent person, which I had doubted earlier.*"

b) Regina reassessed her 'niggles'.

Surfacing and exploring Regina's emotions meant the 'niggles' could be reassessed. Regina summarised that, "*[i]t was also helpful to air my feelings of guilt when we looked at niggles as by airing them they dissipated a bit.*"

Niggle: doubt over valuing own values. Regina "*worried that me just coming up with a list of what I valued was just my way of craftily justifying any decision I felt like making.*" This niggle dissipated when Regina came to see her values as worthwhile and that there was no reason she should not follow her own: "*I realised that my values are very important, and as there's no ultimate source of truth anyway, I'd rather follow my own values than be railroaded into following someone else's.*"

Niggle: guilt over whether she has a right to have a better life. The guilt Regina experienced over asking a lot from life, and having more opportunity than people who have to struggle, was reassessed by realising, "*making yourself deprived doesn't make others less deprived*" and, "*Many of the values I want to live my life by are values that will help others (promoting emotional honesty, social reform, using my talents)*". On reflection she came to see that her new career direction could provide her with the opportunity for social reform, to right some wrongs within society, rather than simply being her opportunity to self-indulgently pursue another career change.

4. Emotions help to test and refine choice

Emotions uncovered in the process were used to aid the search for relevant information needed to test the preferred choice. Regina was anxious about the prospects for the new careers she was considering as a care worker and psychotherapist, and over whether she would enjoy care work any more than she was enjoying working in the media. To assess the appropriateness of these anxieties she had already begun to experiment with care work. As a result of clarifying these concerns and how to assess them in the sessions she sought further information about the amount of likely work and training costs in these two areas.

Regina was excited at the thought of the prospects of these careers explaining this as connected to a sense of "*righting the wrongs... coming back to who I really am*", and finding two fields where "*I can finally have autonomy, status and spend time with people, and get the intellectual stimulation craved since leaving university*". She also felt "*calmer than usual*" which Regina interpreted as a sign of going in the right direction.

Regina modified her decision a little after the session - deciding to train as a psychotherapist and work within the NHS - a change which she attributed in part to material from the sessions sinking in and coming to the realisation, guided by admired role-models, that "*[w]orking in the NHS is more in line with my values re: social reform - people whose work I admire in the field have worked in the NHS, giving them valuable experience*".

5. Exploring other options "Settled doubts"

After developing her list of enlightened values Regina compared her options against these values and came to the conclusion that care work and psychotherapy was the best match. This helped her to "*settle doubts over whether I had overlooked any other paths and broadened my outlook*".

The process of testing her choice was perceived by Regina as initially increasing her level of doubt, but led eventually building her self-confidence in her final choice: "*I think that going through what I believed made me look carefully at myself as I was having to explain myself thoroughly to another person. This created momentary self-doubt and turmoil, but I came back*

stronger because of it, as I then had to look at my doubts and see if my values could withstand them."

6. <u>Plan for how to combat niggles</u>

Regina had reassessed her 'niggles' so that *"my niggles are under control really - though I wouldn't say 100%, but 95% is good enough for me."* Nevertheless even though they were under control it is not the case that emotions that are no longer fully embraced are no longer experienced and hence without influence. Because of this the niggles point to difficulties that Regina might find in carrying out her choice as unwanted emotions are experienced, and a plan for how to combat these was formulated.

Regret about what might have been in her rejected career, fuelled by self-doubt about whether she was *"lacking something in pursuing … the media (insufficiently motivated)"*, was combated by remembering that, as the procedure had shown, this job didn't match her values well, and that *"I should cut my losses as life is short and I'm in my 30s."*

A need for approval was a factor in making leaving her current role difficult, which was combated by remembering that *"people who know me well think I'm making the right choice"* and seeking emotional support from people who approve of the new direction.

Coming to this realisation also helped Regina to combat guilt that was drawing her to staying where she was as, *"I think that's what staying …would feel like - following an agenda which is not quite congruent with my own… I still feel slightly guilty when my manager's nice to me, but that doesn't change the fact that there's no real future for me there."*

The guilt connected to asking too much from life was reinterpreted to provide a motivation pushing change, rather than stopping it as, *"I can see how the sense of injustice from which they spring can be used as a motivator in my career change, rather than as a reason not to do it."*

7. Emotional change: Increased confidence in decision and decision-making process

The emotion-enabled decision-making procedure, it is argued, helped Regina to increase her confidence in her decision-making process and the resultant choice. This is supported by comments from Regina who wrote that through the process, *"I have been able to examine doubts, possible problems and motivations, both unearthing anything I haven't thought through properly and reinforcing the positives behind my decision",* and that this *"helped me feel more confident that I was making the right decision. I can carry out the decision with more confidence now as the process has been so rigorous."*

Leaving the last word to Regina, she identified the following key moments:

Key moment/insight/question/event	How it helped
Being challenged on possible problems I might encounter if I carried out my decision	Forced me to think through how I might implement it more successfully.
Creating a list of what is important to me.	Seeing consistency in myself when I was worried that my desire to change career indicated a lack of consistency
Brainstorming alternative options	Settled doubts over whether I had overlooked any other paths and broadened my outlook.
Suggestions of further research I needed to carry out re: my options	It made me ground my ideas in reality, not just in an idealistic notion of the future.
Coming back for a second session	Helped take into account whether my feelings or circumstances had changed over time.

2.4 Case 2: Peter

Brief Background

Peter was working in a company in a multi-lingual customer service role, dealing with customers over the phone and helping them in resolving their queries. He was wondering *"what job I'm going to do next"*.
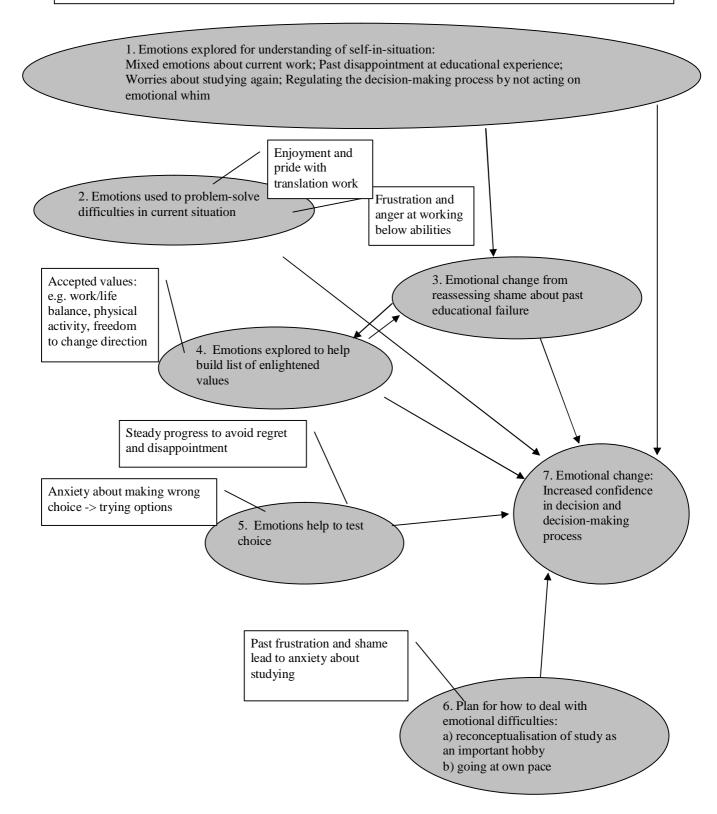
Decision difficulty

Peter perceived the decision as hanging over him for a year, and he estimated that he thought about it at least every day, for 10 –20 minutes on average. He was finding making the decision hard as *"at the moment I have hardly time for myself and am quite tired. I need to actively think about these things and even put my thoughts and options to paper, and then analyse these."*

Summary of the participant's evaluation of the process

In the post-session questionnaire Peter judged that he was very confident in his choice, a choice that at follow-up he had a lot of satisfaction with (*"I feel I'm getting there, slowly but surely"*), and no regrets.

He judged at both post-session and follow-up that the procedure had helped in general a lot, explaining that the process had resulted in him, *"coming to a decision quicker…and in a rather more structured manner than I would have done without it",* and helped with the emotional side very much, noting that, *"The project gives special attention to emotions... This approach was very helpful."*

Case 2: Emotion-enabled decision-making diagram

1. Emotions explored for understanding of self-in-situation:
Mixed emotions about current work; Past disappointment at educational experience;
Worries about studying again; Regulating the decision-making process by not acting on
emotional whim

Enjoyment and pride with translation work

2. Emotions used to problem-solve difficulties in current situation

Frustration and anger at working below abilities

3. Emotional change from reassessing shame about past educational failure

Accepted values:
e.g. work/life balance, physical activity, freedom to change direction

4. Emotions explored to help build list of enlightened values

Steady progress to avoid regret and disappointment

Anxiety about making wrong choice -> trying options

5. Emotions help to test choice

7. Emotional change: Increased confidence in decision and decision-making process

Past frustration and shame lead to anxiety about studying

6. Plan for how to deal with emotional difficulties:
a) reconceptualisation of study as an important hobby
b) going at own pace

Emotion-enabled decision making

Each of the greyed circles is explained in more detail below.

1. Emotions used to help clarify understanding of self-in-situation

Peter had various negative emotions about his work at the company. He felt frustrated and resentful that the company had not provided him with induction, training or support when he began his job to help him deal with enquiries. This had left him *"bearing a grudge"* as new colleagues had received this training; as a result of this he felt no loyalty to the company explaining, *"why should I be loyal if they can't be bothered?"* Peter also felt envy for 'the girls' who had joined later than him but gained better positions in the company; he recognised they were more motivated than he was but stated his motivation dropped when he didn't receive proper training. Peter concluded, *"[f]rustration remains from the past but I now know who to ask – and overall its easier as I've improved. I still bear a grudge as a new colleague has been properly coached - why couldn't they have done this for me?"*

Peter felt frustrated and angry that he was working below his abilities and bored with administrative work that lacked creativity. At the same time he was often tired by the work and resentful that this meant that he could not enjoy his free time as often as he wished. These negative emotions, Peter stated, were getting stronger and stronger over the course of the decision-making sessions.

On the positive side he was proud of his ability to speak many languages and did a sideline in translation work for the company, which he enjoyed. He took pleasure in the companionship of the colleagues he sat next to, and without whom he would have left. He felt proud of the assertiveness he had developed in dealing with difficult customers and obtaining a full time post - through his language skill - while other employees were being laid off. The redundancies though served to emphasise Peter's perception that there was little to be gained from his present employer, so he didn't want to waste his energy by giving it his all if progress was not possible.

Peter's reassessed his current situation, as *"not desperate",* and concluded that he didn't want to engage in *"whimsical decision making"* by rushing into a decision motivated by a mood based on the odd bad day at work: *"I can conclude that overall I don't feel desperate about my current job and I certainly don't want to rush into decisions. I know and am fully aware that I have the odd bad day at work which make me want to rush these decisions but after having completed this questionnaire I'd say that I am actually more satisfied with my current position than I sometimes think I am."*

2. Emotions used to problem-solve difficulties in current situation

Over the course of the decision-making sessions Peter sought to problem-solve some of the difficulties at work that were highlighted by the exploration of his emotions. These emotions suggested both what to change from and where to change to. He was experiencing boredom working below his capacities with a repetitive role, and met with the management to discuss how to increase those aspects of his work that he enjoyed, especially using his language skills. After an appraisal he was told that there was possibility for promotion with a post liaising between two companies that would use his language abilities – this post appealed and he indicated he would accept the offer although his emotion of suspicion warned him that his manager was just talking this up to keep him happy, suggesting that a long term future at the company had limits.

3. Emotional change from reassessing shame about past educational failure

Although Peter was proud of getting to where he had without a degree, further exploration of Peter's emotions revealed aspects of his past that had led him to his present situation. Peter had tried studying for a degree, without success, and had come to Britain to work as he found, to his relief, that in this country it was easier to gain employment on the basis of ability, without necessarily having a degree. When he had studied in the past he found the courses taking over his life, as he put himself under more and more pressure with no time for other things. A sense of feeling cramped had led to him dropping out, but he was left frustrated and ashamed about not finishing his previous education, and regretted the loss of life choices that resulted.

He was aware that shame about the failure had been making him unhappy and limiting him by excluding the option of studying again. He believed he had now dealt with these emotions, as he was aware that it was *"not worth making me unhappy"* and by recognising his mental block about studying and drawing a line under it: "*Previously I was afraid of my past study period as I couldn't let it go and leave the past behind, because it filled me with frustration and shame. Later I came to recognise this mental block and wanted to draw a line and to start looking forward. Now don't know if want to take up studying again but don't exclude it – no emotionally loaded view, quite rational and see if it will fit my life style"*.

It is unclear that he had completely drawn a line under this. He still wanted to avoid disappointment through restricted life chances, but wondered whether it was now *"too late"*, as he felt anxious about studying again, believing that when you are younger you have more energy to start something from scratch. This anxiety made him cautious about studying, although he had successfully experimented with taking some short courses at the local University in a variety of subjects.

Reflecting upon this sense of past crampedness he concluded that he *"should have waited a bit, taken my time"* and that he had *"attached too much importance to a degree, and became too obsessed"*. This previous attitude he attributed to there being *"no-one around me who told me other ways (parents, friends had attitudes more in line with the accepted norm, and stressed the degree was important), and there were no other examples who were able to inspire me at the time."*

4. Emotions explored to help build list of enlightened values

Peter's emotions were used to help build a list of enlightened values: *"The emotions that I wrote down relating to my current position helped me of course understand how I felt about my current position but also they gave me a hint as to what you have to watch out for or have to take into consideration in choosing your next/future job."* His work emotions pointed to the importance for him of values such as a work/life balance, intellectual stimulation, recognition for work done, and physical movement.

These were built upon and refined by the various value exercises in the process, including analysing who he admired and felt sorry for. Peter commented on this exercise that, *"it was in a way striking that the values I admire in others are the ones I later came up with as important ones for myself too. Similarly, it showed that I took note of the negative aspects others are confronted with in their jobs and that I would like to avoid those for myself (e.g. not being free/ independent enough in my job)."* He analysed the values implicit in this admiration and envy as having connection to others, getting the best out of people, receiving gratitude, and having fun and freedom of choice. Those he felt-sorry-for were stuck in their jobs and had poor work-life balance. The values implicit in these emotions he identified as using one's skills, having a social life, having the flexibility to leave an unwanted job, and being recognised for the work one does.

Commenting on the process of identifying values Peter wrote that, *"[i]t was very refreshing to come face to face with your own objectives once put to paper: it felt like I got to know myself a little bit better. It is like discovering what my own values are",* and that *"I do now see that if I really want to be happy in what I'm doing, I will have to pay special attention to my values. Or in other words, I will need to listen to myself more attentively."*

5. Emotions help to test choice

Peter decided in the short term to create a portfolio of jobs: being a sports instructor, teaching, and doing translation work, that he would work towards while carrying on at the company. Peter wanted to avoid both regret, through putting things off too long, and disappointment, through taking the wrong path. In order to pick his way between these two dangers he needed to keep moving forward and try different options to see whether they suited him. He identified as a possible obstacle the fear of making the step of leaving the company; this fear was connected to his anxiety about being disappointed through making a poor choice. He believed that this would be easier once he had tried being a sports instructor to see how well this suited him. In order to pursue the goal of being a sports instructor Peter planned to continue to take courses and to monitor as he went how his skills were developing and how motivated he was by this choice.

6. Plan for how to deal with emotional difficulties

Exploring Peter's emotions had revealed some difficulties around studying. Learning from these emotions he would seek to overcome these difficulties by a mixture of:

a) Reconceptualising the nature of studying as an *"important hobby"* that would allow him to balance study with other aspects of his life.

b) Changing how he studied by going at his own pace and spreading it out.

7. Emotional change: Increased confidence in decision and decision-making process

The emotion-enabled decision-making procedure, it is argued, helped Peter to increase his confidence in his decision-making process and the resultant choice. This is supported by comments from Peter who wrote that through the process, *"I feel my decision making is more founded now. I feel there is less chance of my decision being the result of an unbalanced view. In other words, as this decision-making project took into account the whole spectrum on which a decision should be based, it allowed me to look at my emotions as well as my values, weight them and then match them against my options. (I think this approach/technique is brilliant!) And these strong foundations have now inspired me with more confidence, have reduced my wavering and have strengthened my views and convictions"*. More briefly he summed up, *"In short: I feel confident about my choice because I feel I have carefully thought about it and know my decision is not a whim."*

To give the last word to Peter, he identified the following key moments:

- Understanding the situation: trying to make a decision over which period of time? 3- 6 months
- About my current job – the emotions prevalent and their weighting – this puts it into context: I came to better understand what I really felt about my job and which were the strong and which are the weak emotions
- Emotions as a source of values: it was in a way striking that the values I admire in others are the ones I later came up with as important ones for myself too. Similarly, it showed that I took note of the negative aspects others are confronted with in their jobs and that I would like to avoid those for myself (e.g. not being free/ independent enough in my job)
- My objectives/values and their weighting – this puts it into context: these are according to one of the subtitles in the progress project the things that matter and I wholly agree: to see what I reckon to be key objectives was an eye-opener!
- The further research on my own values were even more enriching: I wanted to feel fulfilled, no stress, etc.
- The brainstorming - that there were many more options possible than I would have dared to think, which means any idea goes, eventually you will have to narrow down anyway, e.g. the portfolio-option was a good question/intervention/idea from David (=my consultant)

2.5 Case 3: Becky

Brief Background

Becky works for her profession's professional society, and, after paying off her student loans and getting a promotion, is considering further study.
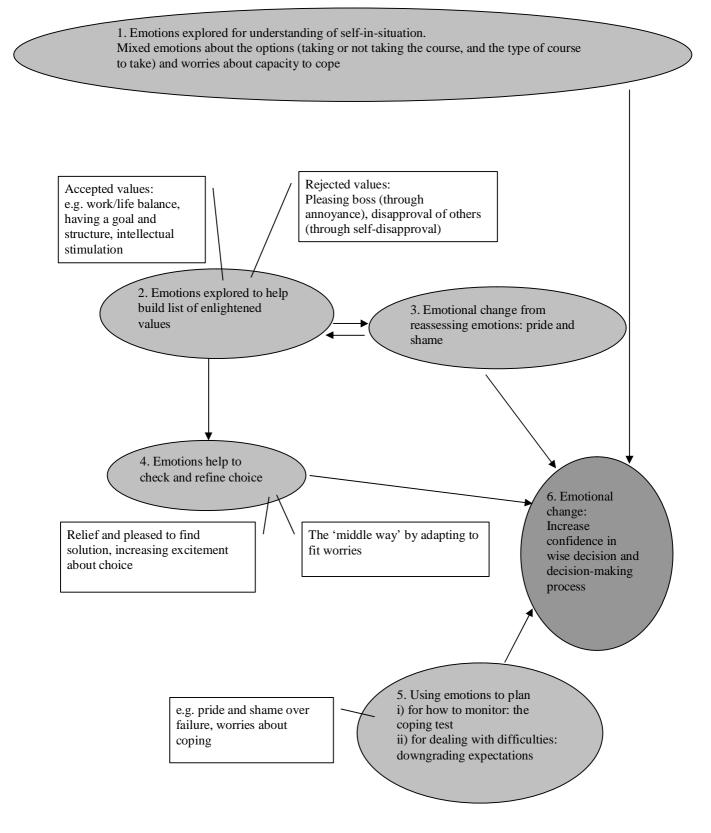
Decision difficulty

Becky perceived this decision as hanging over her for about 5 months and she thought about it at least once a day. Becky described making the decision as hard due to the pros and cons of the different options.

Summary of Participant's Evaluation of the Process

In the post-session questionnaire Becky judged that she had complete confidence in her choice, a choice that at follow-up she expressed a lot of satisfaction with, and no regrets.

She judged at both post-session and follow-up that the procedure had helped generally very much, explaining that she found it *"[e]xcellent. Practical, logical and helpful"*. She stated that the procedure helped with the emotional side only somewhat. Despite the 'somewhat' answer, the analysis below suggests that exploring, using and combating some of Becky's emotions played an important role in her decision making; perhaps more than Becky realised.

Case 3: Emotion-enabled decision-making diagram

1. Emotions explored for understanding of self-in-situation.
Mixed emotions about the options (taking or not taking the course, and the type of course to take) and worries about capacity to cope

Accepted values:
e.g. work/life balance, having a goal and structure, intellectual stimulation

Rejected values:
Pleasing boss (through annoyance), disapproval of others (through self-disapproval)

2. Emotions explored to help build list of enlightened values

3. Emotional change from reassessing emotions: pride and shame

4. Emotions help to check and refine choice

Relief and pleased to find solution, increasing excitement about choice

The 'middle way' by adapting to fit worries

6. Emotional change: Increase confidence in wise decision and decision-making process

e.g. pride and shame over failure, worries about coping

5. Using emotions to plan
i) for how to monitor: the coping test
ii) for dealing with difficulties: downgrading expectations

Emotion-enabled decision making

Each of the greyed circles is explained in more detail below.

1. Emotions explored for understanding of self-in-situation.

Becky had been trying to choose between the options of studying either a taught or a research postgraduate degree or not taking a course at all, stuck as *"there are obvious "pros" and "cons" and it is difficult to picture exactly how these would balance out in practice"*.

Becky's emotions focused primarily on her response to the different options that she was considering. She felt excited about the prospect of taking the taught course, an excitement that she attributed to enjoying discussion in classes, studying and new friendships. Without taking the course she feared she would be bored. She was more drawn towards the taught, rather than the research course, as the research course would lack structure and provide less in the way of class discussions and new friendships.

Although drawn towards the course she was worried about starting and then not coping with the work load and the lack of leisure. Not coping would have the knock-on effect that if this were to happen she would be ashamed and think badly of herself, and shamed in front of her boss, family and friends as she believed they would think badly of her as well. She was also worried that her pride would *"[t]rap... [her]self into thinking I need to finish"* and she would not be able to stop the course if it wasn't working out.

A solution would be to not take the course but this would lead to disappointment with herself and existential guilt - not taking it up would be a failure, as it would mean *"[b]eing too much of a wimp to cope with it, failing to have the courage of my convictions, not living up to ideal of self"*. As well as feeling shamed about what others would think if she took the course and couldn't cope, she was also concerned what her family and friends would think if she didn't try. She was also worried that her boss would think she was 'flaky' as she'd told him about the course and asked for a reference. Her boss clearly wanted her to take the research degree, which also worried her. On reflection she felt annoyed at him about this as she judged that his

decision not to allow her to work part-time if she took her favoured taught course was based on what he thought her best interest was – not what she thought was her own best interest.

2. Emotions explored to help build list of enlightened values

Becky's emotions were used to help build a list of her enlightened values. For example her excitement at the taught course option pointed to her values of intellectual stimulation and having a goal and structure, whereas her worry about the course pointed to her valuing a work/life balance.

In describing her perfect day Becky identified the emotional components of flow – that she liked to be engrossed in a task with clear goals but not overwhelmed by time pressure – and these components fitted with what she felt excited about (being engrossed) and what she feared (being overwhelmed or bored).

Through reflecting on her emotions, and her emotions about her emotions Becky rejected the values of pleasing her boss (through annoyance at his perceived lack of interest in her own ends), and more generally seeking the approval of others (through the self-disapproval she felt at this tendency). This is explained further below.

3. Emotional change from reassessing emotions

The process of elucidating Becky's worries about how others would judge her also triggered a meta-emotion of self-disapproval that evaluated these worries; *"[l]ooking at the … previous worries, I am worried that I may make the decision on the basis of what other people think, rather than choosing the option that will ultimately make me happiest!"*

Becky's assessment of her shame in front of her partner went through different stages as she reflected upon this emotion. In the pre-session questionnaire she believed she would feel ashamed in front of her partner if she didn't take the course as her partner *"will think I'm a wimp"*. Initial reflection upon this emotion led to the view that she didn't really worry about what he thinks as he *"doesn't really care. If don't take course he will be surprised, might look down on me a bit as knows I do want to do the course (I lack the courage)"*. This assessment

evolved on further reflection and Becky came to believe that she would feel ashamed in front of her boyfriend if she didn't try but not if she tried and gave up. Indeed he would criticize her more, she felt, if she didn't stop if it became too much: if he thought she was just *"doing it for pride"*. Asked who she admired Becky identified her boyfriend as he *"[d]oes what he wants, without worrying what other people think"*, identifying the implicit value behind this as being *"[i]t's a good thing to have things you want to do in life that are independent from other people's expectations"*.

The move from being heavily influenced by worries about how others would judge her was plausibly influenced by other factors touched upon in the decision-making process:

i)   Identifying existential guilt - *"Having a goal to work towards which is personal - means something to me - independent from other people's expectations"*

ii)   Imagining what a good friend would advise - *"to do what I want to do without paying too much regard about what others think – to do course"*

iii)   Identifying a friend she feels sorry for – *"someone who lives with his parents and misses out on the challenges of independent living that make life more enjoyable"*.

<u>4. Emotions help to check and refine choice</u>

After building a list of her values and searching for options Becky decided on a 'middle way' to ease her worries; she would start the course and monitor whether she was coping and finding it enjoyable and adapt her choice, if need be, by stopping or spreading out the course: *"Looking at my options more precisely made me realise that there were things I could do to ease my worries (eg not committing myself to continuing past first term)"*

Interestingly in the pre-session questionnaire Becky had already identified stopping the course if it got too much as a possibility, but not one that was 'live' at that time; as she explained, *"[a]lthough the particular option of trying the course for a term was always there, I needed to realise how much the "pride" aspect of "giving up" affected me before realising what a sensible option this was."* She also wrote that the procedure helped her with *"Understanding my own personal feelings about the options …I've identified some underlying feelings (eg fear*

of failure) that I wasn't 100% aware of before, so I now feel that I am making an informed decision (ie informed about my own feelings about it)".

Becky was relieved that the decision she reached was to start the taught course and found her excitement at the thought of starting the course further intensifying. She was pleased to have found the right answer as before she thought she had two 'iffy' answers (either accepting the place and doing the course, or turning down the place and not doing the course), and was relieved at the thought of having an escape hatch if the course didn't work out as she hoped.

5. Using emotions to plan

Becky was worried about the impact of the choice on her work/life balance and about being able to stop once she started. This worry points to the danger of the choice to Becky's work/life balance and, especially when combined with the possible blow to her pride, a possible barrier to carrying out the choice.

In order to capture the wisdom in this emotion and to combat its potentially disorientating force Becky adopted the following coping test. After each term she would ask two key questions. First, *"[h]as the course taken over my life to the expense of other areas of work and leisure?"* and second, *"[a]m I enjoying the course?".* The answer to these would be used to determine whether to carry on, give up or spread out the course over a longer time period. As possible difficulties to these tests Becky recognized she would have to beware of convincing herself she was enjoying it when she wasn't (this was related to her worry about not being able to stop) and that she also needed to look for whether a lack of enjoyment was a short term blip.

Becky also fought against the dangers of shame *("will they think I'm a wimp")* and pride (about stopping) by changing her own and others framing of what she was doing by downgrading expectations; she was 'trying' rather than 'taking' the course so that shame, from the perceived negative judgments of others, and wounded pride, at giving up, would not be so relevant.

In the follow-up questionnaire she wrote, *"I am enjoying the course. Although fitting the course round work is sometimes hard, it's still worth doing. [The] idea that I was free to stop after first term was comforting at the beginning, but became irrelevant (I definitely will carry on, at least for the first year)."*

6. Emotional change: Increase confidence in wise decision and decision-making process

Becky's initial dilemma of whether to take the course or not can be seen as balanced between emotional fors and againsts:

For:	Against:
- Excitement at realising values (structure to day, goal, classes, studying, new friends etc) -Avoiding existential guilt ("not living up to ideal of self') - Avoiding fear of boredom - Shame through disapproval of others (friends, family if don't do the course)	- Shame through disapproval of her boss who wants her to do the research degree - Fear of not being able to cope (and loss of some values - work/life out of balance); and then - Disapproval of others for failing; and - Being unable to stop the course through false pride

This emotional balance, it is plausible to conclude was 'tipped' by reassessing some of the emotions, building a list of enlightened values and finding an option, the 'middle way', that realised these values and negotiated a way through these emotions.

Although Becky commented in the post-session questionnaire that the procedure only helped 'somewhat' with the emotional side this analysis suggests that working on her emotions played a not inconsiderable part in her resolving her dilemma. She explained her 'somewhat' answer as *"[m]aking me see that there was in fact an emotional side (I'd previously seen it in a more "factual" way)".* Becky did comment of the procedure *"that it is very helpful!"* What was it that was helpful? The procedure didn't bring to light much that was factually new to Becky, but rather highlighted and analysed some of the emotional undercurrents of the decision components. In explaining what she found helpful she wrote that, *"[i]t wasn't so much that I understood more about my situation, values, emotions or options as that I understood more how they inter-relate."*

Giving the final word to Becky she identified the following key events:

Key event	How it helped
Completing the pre-session questionnaire	Clarified the decision. I also found I was trying to "steer" my answers to one option, which made me realise that was what I wanted to do.
Completing the Values questionnaire	Made me realise the relevance of some aspects of me (eg need to have structure and balance in life)
The matching of options against objectives	Made me realise there wasn't an objectively "right" decision, but that different options were better/worse for me because of my own particular "take" on life

2.6 Case 4: Lucy

Brief Background

After a period working in business Lucy had spent time at home looking after her children and working on a children's book. Now she was contemplating returning to work as she found writing at home difficult, and wanted more money and the break from her routine that work would bring. Lucy framed her decision in these terms: *"There are two connected ones. One, whether I should go back to full-time work next year. Two, whether it is teaching… I should do."*

Decision difficulty

The decision, Lucy felt, had been hanging over her for 1½ years in general, with contemplating the teaching option lasting over the last 5 months. Lucy stated that she found making the decision hard, as there were conflicting interests, and thought about it at least once a day.

Summary of Participant's Evaluation of the Process

In the post-session questionnaire Lucy judged that she had a lot of confidence in her choice of pursuing teaching, a choice that at follow-up she was somewhat satisfied with and with which she had a few regrets, which she explained as, *"I still don't know if I can carry this decision out!… I'll only know by next year whether this was an utter waste of time and health or not!!"*. What had brought about this loss in confidence was *"the emotional issues accompanying this decision… Up to now it has involved great difficulties with family life and several breakdowns on my part."* Because of these difficulties she was not *"sure whether the aggro involved is worth it or not. I'll only know this next September."* This participant was contacted later still to follow-up her decision when she revealed that, despite continuing to believe it was the best option, because of emotional difficulties she had not managed to keep going with her choice of teaching and had returned to a career in business.

Case 4: Emotion-enabled decision-making diagram

1. Emotions explored for understanding of self-in-situation
Dissatisfactions with current situation; hopes for the future and anxieties about coping

2. Emotions explored to help build list of enlightened values

3. Emotional change: Reassessment of anxieties about coping, being daunted and shamed

Anxiety about impact on family life, sadness from missing work, avoiding feeling bad

Anxieties about coping used to suggest different flavours to teaching

4. Emotions help to suggest range of options

6. Emotional change: Increase confidence in wise decision and decision-making process

5. Plan for how to combat anxieties (Rearranging domestic duties, time-off, exercise to increase energy levels)

anxieties over caring for children and house (from limited time and energy)

Each of the greyed circles is explained in more detail below.

1. Emotions explored for understanding of self-in-situation and 3. Emotional change

Lucy was experiencing considerable distress in her current situation explaining, _"I've been very depressed lately with the children going to school and growing up"_. Because of this she wanted to feel "_more 'up' and more interesting"_. Lucy also desired more money, so her daughter could get her own room and she could take the family on exciting holidays and she would not have to ask others for money, which she hated.

Contemplating the option of staying at home Lucy feared that she would continue to be low and that she would be _"unable to cope with my emotions, just as I did this year if I don't work."_ This fear was felt very strongly and she believed was appropriate as _"it happened all this year and nothing is changed."_ She believed that going to work would improve her emotional state as, _"[e]motions are better kept under control when I'm busy and can't think too much. I think a year or two of being busy will fix them."_

She did also hope that going to work would help her to overcome her difficulties with writing as _" I need 'outside input' and diversity (as in a job) to help with inspiration."_ Indeed when asked to imagine a perfect day Lucy included meeting with her publisher explaining that, _"I don't know why but I won't be happy unless I have completed one of my ideas. It's because I feel I have it in me but somehow can't bring it to completion, which indicates some lack somewhere."_

Contemplating the option of teaching brought up mixed emotions for Lucy. On the one hand, _"[t]he idea of having a nice rapport with a class, of getting people to understand maths and getting them enthused about it is very exciting."_ While on the other hand, "_[t]he fear of not getting near there, of everybody ignoring me when I'm trying to talk to them, is daunting."_ Lucy experienced the emotion of being daunted strongly as, _"I can imagine talking about maths to an interested, well behaved group of people, but cannot imagine going into a class and controlling it."_ Asked whether this emotion and its strength were appropriate Lucy

replied, *" I don't know. Yes it would be if I can't get the hang of it, but hopefully if I am well prepared it would be OK. I've seen classes where the teacher had no control and thought "so what, he didn't even seem to mind". However, when I tried to teach French in a class for only 20 minutes and couldn't get the discipline, I was happy to get out. To be fair, though, this happened when I wasn't prepared or not in the mood."*

Lucy initially stated that he loved teaching mathematics one-to-one, although on reflection she realised *"I don't really love it that much. Thinking about it it's actually [my daughter] I really enjoy teaching to as she's got a real understanding and interest in maths."* Asked whether the emotion and its strength were appropriate she replied, *"well it would be nice if it was stronger but I don't consider it a problem. I was not prepared adequately for the little tutoring I've done and would do better and enjoy it more if I was, which I will be by the end of next year."*

Lucy was anxious about being able to *"cope with a job that demands constant energy in a perhaps noisy environment"*. This anxiety she experienced fairly strongly explaining its appropriateness as *"[i]n the little I taught before, there was a real difference in results when I was prepared and in my 'strong' mood as opposed to in my 'weak', 'want to get home' mood. In teaching I'll have to be constantly in my strong mood for 5 classes a day, and I don't know I can do that. In IT you do need a strong mood for some things, but not all day every day."*

A further problem was how Lucy would manage both teaching and looking after her children and house. She spent a week on a course as part of experimenting with teaching and reported, *"it was evident from my week at the course that it would be a problem"*. On reflection she wondered how accurate this assessment was as *"we could perhaps have more 'quality time'. If I organise housework and homework more efficiently I'll have more time. If I try to be more healthy (sport, more sleep) perhaps I'll have more energy after 5 pm."*

When she contemplated the difficulties that daunted her Lucy expressed a concern about being ashamed in front of her parents and getting *"unwanted advice"*. She imagined her mother telling her *"how easy it all was for her to cope with children and how teachers who can't*

manage are bad and so on." The fear of being ashamed in front of others she recognised as fluctuating, depending upon how she assessed her weaknesses.

2. Emotions explored to help build list of enlightened values

Along with other value identification exercises Lucy's emotions were used to build a list of enlightened values. For example her anxiety about the impact of work upon family life suggested that she highly valued her children being happy and having the time and energy to spend with them. Her sadness from staying a home suggested she valued increased contact with the world, and she valued not experiencing certain emotional states such as shame from failing in front of others.

4. Emotions help to suggest range of options

Lucy's anxieties about the impact upon family life and controlling a class of secondary school children were used to modify the teaching option, to keeping an open mind about what subjects to teach and whether to teach Primary, Secondary, or Adult Education.

5. Plan for how to combat anxieties

Lucy's emotions revealed anxieties about coping with the demands of teaching, managing family responsibilities and trying to write. Lack of time and tiredness were the main obstacles she identified with possible solutions including re-arranging family and domestic responsibilities, getting time off from family duties and being more healthy by engaging in sport to generate more energy.

6. Emotional change: Increase confidence in wise decision and decision-making process

Lucy identified the following key events:

Key event	How it helped
The 'options pros and cons' of the before-session.	Writing all the pros and cons of every option clarified the situation for me.
The 'working on emotions' part	I realised that some of the emotional aspects which seemed to weigh heavily were actually not important at all. This was when I had to rate their strength and you put all of these emotional aspects next to each other.
The values analysis	I don't know why this helped, it seemed to make me rethink things and I found it hard, but when the next progress came things were more clear. (sorry, very inarticulate).
The 'evaluating options against what matters' part (in #9)	That really was a good consolidation to number 1 (above) after the whole process and confirmed my job vs priorities matrix.
The consultant feedback	Feedback was constructive (suggesting new ideas, organising my answers) as well as non obtrusive. This helped a lot.

In the post-session questionnaire Lucy believed that the procedure had helped with the emotional side a lot explaining that *"[t]he decision process forced me to analyse my doubts instead of having vague negative feelings I didn't want to think about. It proved that rationally it is the best option. It showed me that I can do something to counteract the potential negative aspects of the decision, and also that there are many options within the decision, ie it's not a 'this is it and you're stuck forever' option."*

Lucy in the end abandoned his attempt to pursue teaching. By the time of the follow-up questionnaire though her views had changed as now she thought that the process *"didn't force me enough to investigate the vague fears I had, which I did put into my lists but with a low rating. They've turned out to be all powerful"*.

Drawing upon her answers in the follow-up questionnaire and further contact it seems likely that her difficulties were connected to two sources:

i) Unpredicted value conflicts as *"some points of the decision have turned out to be a problem with my values. For example, "telling people what to do" (as teachers do) is a major problem for me as it's not something inherent in my values. I never realised this until being in the "teach-them" situation"*

ii) Unpredicted emotional difficulties as *"I've had several irrational emotions (as in breakdowns) not foresighted by Progress and I'm still not sure whether they'll take over or not."*

Lucy still judged at post-session that the procedure had helped very much and at follow-up, looking back, she still rated the procedure good, but commented, *"I would use it because it clarified my rational process and helped me rate my priorities. However, I now realise that irrational reactions I didn't know existed can rule rational decisions, to a degree I'd never experienced before. So next time I would use Progress for the rational bits but pay more attention to the "irrational" concerns I had before I even started. I would recognise their potential importance, and investigate them more: ways to cope with them, or perhaps a recognition that I would never cope with them!"*

2.7 Case 5: Doug

Brief background

Doug had recently been made redundant from his job in the City and diagnosed with a chronic illness. He put the decision facing him this way: *"I want to decide which career direction to take. Should I continue with a career in the City and reap the financial rewards this may offer me. Or should I take this opportunity to try something new, perhaps utilising the skills and numerous City contacts that I have already gained."*

Decision difficulty

Doug felt the decision had been hanging over him for, *"[o]ver 5 years, to varying degrees, although it has become critical in the last 12 months."* He thought about the decision constantly every day and was finding the decision hard because leaving *"the City, foregoing 10 years of experience, relevant degrees, a good salary and hundreds of useful City contacts is not easy. However, although embarking on a new career could be more fulfilling, there are no guarantees of this."*

Summary of the participant's evaluation of the process

In the post-session questionnaire Doug judged that he had a lot of confidence in his choice, a choice that at follow-up he had a lot of satisfaction with. He judged at post-session that the procedure had helped very much commenting that it, *"[m]akes me think more long-term about what I want rather than giving in to the more short-term problems of lacking money and being pressured by others or pressuring yourself"*, and at follow-up he judged it had been good as, *"[i]t made me think of the options more clearly. It made me be more open to change. It made me think more clearly about what I want."* The procedure helped with the emotional side a lot: *"[t]hinking more about your feelings and what makes you excited. This has become more important to me"*.

Case 5: Emotion-enabled decision-making diagram

1. Emotions explored for understanding of self-in-situation.
demotivation and relief about past job, anxiety, excitement and strong desire about the future, anxiety about choosing

Accepted values: Work-life balance, contribution to society, right amount of ambition, pride in job

Rejected values: emphasis on money

2. Emotions explored to help build list of enlightened values ("what makes me tick")

3. Emotional change from reassessing emotions:
a) Not being pressured , thinking long-term
b) Not clinging on to the job in the City

Excitement and nagging feeling it is a good choice but also worries -> further information search to resolve

4. Emotions help to test and refine choice

5. Emotional change: Increased confidence in decision and decision-making process

Emotion-enabled decision making

Each of the greyed circles is explained in more detail below.

1. Emotions explored for understanding of self-in-situation

a) Emotions about the past: demotivation and relief

Doug had become demotivated in working as he couldn't see the viability or value of the company he was working for, and felt relief about being made redundant, an emotion he explained as coming from his working with a weak product he didn't believe in.

b) Emotions about the future: anxiety, strong desire and excitement

Although he was relieved to be out of his previous job Doug was anxious about his future, both in terms of his financial situation and finding a new career. He expressed a strong desire to make the most of life after his illness - *"life is not a dress rehearsal"* – and was excited about change and doing and learning something new.

c) Emotions about the decision: anxiety

Nevertheless he was anxious about taking the wrong job and feared being pressed into a mistaken, hasty decision due to financial pressures.

2. Emotions explored to help build list of enlightened values

Doug saw the exploration of his emotions as helping him to gain a deeper view of his values. The process *"made me think more clearly about what I want ... Using emotions to work out my values. Looking at people I admire/envy or feel sorry for to work out my values. I guess I knew my values already but never wrote them down or analysed them so deeply."*

Doug admired

i) his brother, who worked as an architect, for following his own lights, being creative with a real product and being in contact with ordinary people (helping them is even better he commented).

ii) a friend teaching in primary school for the balance in his life (which left him time to do other things) and the rewarding and worthwhile nature of his job,

iii) another friend running his own business, for the autonomy and control over his own life this provided him

iv) a relative for his capacity to live for the now, and *"being well-rounded, down to earth, not too materialistic, not too idealistic either!"*

He felt sorry for two types of people. First the workaholic stuck in a rut who fails to get the right balance between home and work, not having the time to have new experiences both in and out of work, and being obsessed by money and having it take over your life (as money creates its own desires). At the other extreme he felt sorry for the person living on benefits who lacked the right amount of ambition and didn't make a contribution to society.

In his list of values Doug also identified emotions that he wanted to experience in his future career, that he found lacking in his previous job – for example enjoyment, not being too stressed and being proud of doing a worthwhile job.

Doug compared the session to professional career and CV writing advice he had also received. This advice was *"largely centred around my previous work experience and what skills I have gained rather than looking at what really mattered to me"* and was *"perhaps jumping the gun. I needed to go much further back and think about what makes me tick"*.

3. Emotional change from reassessing emotions

Doug came to realise that he was feeling pressured in his decision making by others and himself. The process helped *"me think more long-term about what I want rather than giving in to the more short-term problems of lacking money and being pressured by others or pressuring yourself."* Rather than feeling pressured he resolved to *"[t]ry to be as well-informed as possible about possible jobs (talk to people, get some experience, read)"*.

Initially he had defined the decision he was facing as: *"I want to decide which career direction to take. Should I continue with a career in the City and reap the financial rewards this may offer me. Or should I take this opportunity to try something new, perhaps utilising the skills and numerous City contacts that I have already gained."* After reconsidering his situation and

emotions Doug reframed the decision-problem to: *"I want to decide which career direction to take. I don't want to continue with a career in the City even if this means reaping the financial rewards this may offer me. I want take this opportunity to try something new, perhaps utilizing the skills and numerous City contacts that I have already gained. The question is what?"*. Thus Doug screened out the option of working in the City from his previous formulation of what he was deciding about. This change in perspective Doug attributed to an emotional realisation, *"I didn't realise how much I was still clinging onto a job in the City"* and explained the procedure *"helped me accept a lower salary in favour of other attributes."*

In considering teaching he identified as two objections:

      a.   *"what other people think…[as] it damages my pride element"*

      b.   fear of being bored

Although these objections *"really makes me have doubts"* Doug challenged these emotions, noting they were triggered by comments from someone whose father had been a teacher; *"[b]ut is he wrong. His father was a teacher for 30 years and he said he got stale. Well, of course, anyone would get stale after 30 years in 1 profession - sounds like prejudice to me."* Doug also noted that teaching as a career provided the opportunity to leave and come back to, something that would fit his other career options of running a business (which he described as his passion) and providing training in the corporate world.

4. Emotions help to test and refine choice

Although he was excited by the prospect of teaching and had a *"nagging feeling"* that it was a good choice, he did not take these emotions at face value, concluding instead that his mixed emotional response suggested he needed to spend more time investigating the teaching option; *"I need to find out more about teaching … I feel worried about my interest in teaching. Most people that I talk to are very negative about it. I need to assess this much deeper."* As a result he talked to more teachers and took part in teacher tasters.

5. Emotional change: Increased confidence in decision and decision-making process

Doug expressed that he had a lot of confidence in his choice *"as I feel excited about this route. I would not say complete, because I feel that financially things are going to be difficult following this route. I may have been unrealistic about what I can survive on - perhaps the lack of income will gradually eat into the enjoyment of my new career?"*

Overall the process *"has definitely given me more confidence in making decisions - something I have never been provided before."* Doug identified one key moment in the process: Understanding what really matters as this *"makes me think more long-term about what I want rather than giving in to the more short-term problems of lacking money and being pressured by others or pressuring yourself."*

2.8 Case 6: Simone

Brief background

Simone framed her decision as a career choice between a set of options: painting, writing and psychology/counselling.

Decision difficulty

Simone felt the decision had been hanging over her for five years, and she thought about it throughout every day. Asked how much time she had spent thinking about this decision she responded *"I have spent: 5 times a day, every day for the last 5 years! I'll let you do the maths!"* She rated making the decision as impossible, writing *"I find that I often feel paralysed, as I cannot decide which direction to follow!"*

Summary of the participant's evaluation of the process

In the post-session questionnaire Simone judged that she had a lot of confidence in her choice, and at follow-up she had a lot of satisfaction, although she did slightly revise her decision. She judged at post-session that the procedure had helped very much, and at follow-up she rated the usefulness as good, as *"[i]t was important to look deeply at what was driving me"* and *"[i]t made me really look at my life",* and that it helped with the emotional side very much.

Case 6: Emotion-enabled decision-making diagram

1. Emotions explored for understanding of self-in-situation.
(inc. mixed emotions about choices, fear of failing, desperation about lack of direction)

Accepted values:
Creativity, being self, being open

Rejected values:
need for approval from conformity to other's values

2. Emotions explored to help build list of enlightened values

3. Emotional change from reassessing emotions:
a) increased sense of trust in own judgements through recognising others emotional strategies
b) anger at others perceived manipulations reassesses guilt over confrontation
c) pride in standing up for self and facing difficulties

Calmer, happy and excited (less stressed and depressed)

4. Emotions help to test and refine choice

6. Emotional change: Increased confidence in decision and decision-making process

5. Plan for how to combat emotional difficulties (e.g. changing family dynamics, recognising other's agendas)

self doubt,
need for confirmation

Emotion-enabled decision making

Each of the greyed circles is explained in more detail below.

<u>1. Emotions explored for understanding of self-in-situation and 2. Emotions explored to help build list of enlightened values</u>

a) Mixed emotions about painting, writing and psychology

Simone's emotions about her main choices were complex, revealing a range of different values implicit in these choices. She loved painting, a love she expressed as being related to being on her own, and having freedom, with no-one to tell her what to do, while she also loved to work with other people on art to *"exchange ideas, get a buzz"*. Nevertheless her emotions pointed to a value gap in her painting life to date, as sometimes she also hated painting as it left her feeling under-stimulated cerebrally, which she connected with being stuck in a closed, repetitive world. Her worry about the precariousness of life as a painter, connected to being scared of ending a failed painter with no other career options and poor, also pointed to her valuing more conventional goods such as a career and money. Analysing her feeling scared of failing, Simone revised the factual but not the value judgment in the emotion, reasoning that she would not be career-less and poor if painting failed as she had other career options and it is possible to live as a single person on £10,000/year.

She enjoyed (but did not love) the writing course she was on, as she enjoyed hanging out with the students on the course and working with others on a shared project. She was scared to give up the course explaining that it gave *"it gives me structure"*, adding *"when people ask what am I doing I can say I'm a student"*, reflecting a common theme in her anxiety about how she was viewed by others.

She loved psychology, in particular *"talking about things that are slightly uncomfortable – stuff that people don't want to talk about (my family), important things, what makes people tick"*.

She felt somewhat ashamed as she believed others saw painting as *"silly, self indulgent"* and were resentful that they were doing 9 – 5 jobs and hating it; this shame and perceived resentment motivated her to think she should fit in.

b) Desperation about life direction and fears

Simone felt desperate at "*[n]ot having one clear direction*" and *"[n]ot having the security of getting up everyday and knowing I have a purpose – a plan of do this today, this tomorrow, in a month here etc"*. Despite this lack of direction Simone also feared pursuing *"one option for a period of time and it not working out"*, although on reflection she questioned this judgment as she thought she would be *"bloody good at it"*. Another fear was of boredom, as she had *"done many things and always get bored",* although this judgement she also moderated on recognising that painting and psychology had not bored her, although she had found her waitressing job, her writing course and her degree boring.

2. Emotions explored to help build list of enlightened values

Asked who she admired and who she felt sorry for Simone compared Kate Bush, who she admired for being completely free, totally herself and creative, with Michael Jackson who she saw caught up in *"the whole fame thing"* and a friend who *"doesn't like himself, only rating himself as far who he knows"*. The value implicit in these emotions Simone identified as being yourself and not listening to others.

3. Emotional change from reassessing emotions

Simone had a complex relationship with what she saw as a difficult family and much of the two sessions were spent in Simone exploring her emotions about herself and her family and their implication for her decision. She saw herself as the family scapegoat, which she tried to deal with by pleasing others and *"trying to be everything to everyone"*. It is this that she thought had led her to being confused as, *"I had to play a role, juggle, personalities to suit the mood (my mother is quite unpredictable)...[and] as a child my perceptions were treated as wrong. There was serious emotional confusion to control me. Devious, underhand methods were used (lets really fuck her up). I was undermined in my judgements. This has left me with a lack of trust in my judgements."*

Simone started to tentatively revise her assessment of her trust in her judgements, commenting about a family conflict, *"[b]ut really I was right – probably/possibly. My judgements are more accurate and valid that my mother's. My judgments are more accurate than my dad – he doesn't really respect my judgement.… Maybe he told me I was wrong because he was afraid . And perhaps still does. Maybe he has got in the habit of telling me I'm wrong."*

Simone also started to interpret others emotional strategies and revise her judgements to take these strategies into account. For example, her mother, a model, she now judged to be jealous of her, *"as her life has passed – her youth gone."* This jealousy led her to targeting Simone as *"I think I'm an easy target as my brothers don't put up with as I do."* She recognised an emotional strategy in her mother's jealousy, noting that *"sometimes she makes me feel bad about my career as hers isn't going anywhere."*

Simone came to understand that guilt led to her being unable to defend herself against being manipulated like a *"plasticine doll"*. This guilt she identified as related to protecting her family from confrontation with uncomfortable truths about themselves, as if she defended herself against emotional manipulations she would be *"[u]psetting other people, rocking the boat, opening a can of worms where scary things will come out"*. This propensity to guilt also led to a fear that others try to use this guilt to curb her judgement.

An added layer of complexity to this was Simone's desire for confirmation. While Simone wanted to receive confirmation of her worth from her family Simone felt stuck in a Catch 22 as *"I would have to open the can of worms to get the kind of verification I want, but what would happen is that this information would be used to manipulate me more and I'd end up in more need to verification as more confused"*.

Recognising these emotional strategies that had been used against her led Simone to experience anger towards her family and their attempts to control her, expressed as, *"[h]ow dare they judge me, get out of my face (stop telling me what to do as you don't know me)"*.

4. Emotions help to test and refine choice

For Simone emotional changes from feeling stressed, depressed and confused to calmer, happy and excited confirmed she was moving in the right direction. She wrote afterwards that "*I feel so much calmer and happy now. I know what I want and am excitied about going and getting it!*" and "*I feel excited and positive abouit the future wherase before i felt stressed, depressed and confused!*" (*sic*).

5. Plan for how to combat difficult emotions

Re-evaluating her view of herself and her family dynamics led to a change in her attitudes as she concluded, "*I'm going to stop listening to what everyone says and do what I want to do*". Simone started to experiment with different ways of relating to her family explaining that, "*I decided to not allow myself to play my usual role and accept bad behaviour from my family (I didn't realise how easy it would be – not dealing with guilt after a row with my brother)*". Simone expressed pride in standing up for herself and her general capacity to face up to difficult things.

She came to feel more confident in herself, believing she "*could still retain my beliefs under criticism*". This increased strength came from two realisations. First, that "*people have their own agendas*" when they give advice, a realisation related to the view that emotions are sometimes strategies used by people to forward their own interests, and second, and more simply, that when people give advice they give it from within their own perspective as "*they think what would they would do in this situation (their values and beliefs) not what should I do*".

This confidence also manifested itself in the realisation that "*if I was weak people responded to that*". Now when people ask her what she is doing "*I don't minimise it – when my sister phoned I said I couldn't meet as I was doing painting. When people tell me I am a lady of leisure this doesn't annoy me half as much as it did.*"

6. Emotional change: Increased confidence in decision and decision-making process

Of all the research participants in their immediate assessment Simone was the most positive – enthusiastic would not be too light a term. For every question that asked her to specify how much the sessions had helped different aspects of her decision making Simone checked "very much". Asked to identify the key moments she picked out:

Key moment/insight/question/event	How it helped
What I valued	Helped me see what was important to me.
Realising that I placed too much emphasis on what other people thought I should do.	This helped me focus on what I wanted and not what others opinions were.
Looking at what other people I admired.	Helped me see that I was interested in my own self actualization.
Looking back into my past	Helped me see my faulty beliefs based on past experiences.
Discovering what I wanted and not what other people want from me.	

Asked whether she thought the sessions had helped in some way other than the situation, values, emotions or options she wrote that *"I feel more confident in myself. I care less what people think about me and this makes me more stable and chilled"* and that the sessions *"[h]elped me see negative patterns in my relationships, especially with my family (eg being manipulated) and I think as a result relationships have improved. This will be ongoing!"* (sic).

Asked for her overall assessment she wrote *"FANTASTIC"*, if her decision making was hindered in any way she replied *"NO! It was a godsend!"*, if she had any suggestions for improvement she replied *"I know it sounds cheesy, but I really think it was brilliant and don't have any criticisim! It came at exactly the right time in my life and was more helpful than I thought it could ever be. I am SO grateful! I would recommend it to anyone!"* and if she had any other feedback she offered, *"BRILLIANT, FANTASTIC, EXCELLENT, WOW!"* (upper case in the original).

In the follow up questionnaire several months later Simone was still appreciative although her enthusiasm had cooled a little. She now rated the procedure overall as good, rather than very good, explaining the good as *"[i]t made me really look at my life and what was driving me"*

and *"I could focus on myself and my needs not other peoples ideas about myself. It helped me feel stronger and more independent. It helped me to make my own decisions in the future."*

Simone explained her changing evaluation of the sessions in this way: *"It was great but my high kind of wore off when I realised I couldn't stick with my decisions 100%. Life is very complicated and changes all the time. I needed to feel ok about flexibility. I wanted Progress to be a miracle cure but of course life isn't that simple!"*

She also pointed out that when it came to carrying out the decision that *"mmm I kind of clung onto the idea that I couldn't go back on my decision and felt bad when I had to break it ."*

2.9 Case 7: Patricia

Brief background
Patricia framed the issue as two decisions, first to decide whether to stay or move from her current job as an administrator in a research centre, and second to determine her priorities.

Decision difficulty
Patricia perceived the decision to have been hanging over her for about six months. She stated she found the decision very hard because of *"so many unknown factors"* and *"being pulled in opposite directions"*.

Summary of the participant's evaluation of the process
She judged at both post-session that the procedure had helped very much and at follow-up that the procedure's helpfulness was good. The procedure helped with the emotional side, a lot as it was *"[i]mportant to acknowledge what my values were and not be prejudiced by views of others or factual information which was not crucial to the decision"*. More generally she wrote *"[m]y overall assessment of Progress – certainly very helpful for me – could possibly short cut hours and hours of counselling!"*

In the post-session questionnaire Patricia judged that she had a lot of confidence in her choice, a choice that at follow-up she expressed a lot of happiness with, and a few regrets as *"I am uncertain whether my present job is the ideal job for me although I am happy with many aspects of it."*

1. Emotions explored for understanding of self-in-situation.
(about current work, about self in work situation, and about undue influence from others)

Importance of self-respect, competence, loyalty

Others values rejected

2. Emotions explored to help build list of enlightened values

3. Emotional change from reassessing emotions:
a) 'moving on' from regret and guilt and sorting out the important factors
b) how would feel in the future – regaining self-respect

'Intuitive' choice (following emotion based thought experiments)

4. Emotions clarify and confirm the choice

Relief in the choice

6. Emotional change: Increased confidence in decision and decision-making process

5. Plan for how to deal with difficult emotions (e.g. selling the choice to partner, changing attitudes (Serenity Prayer), changing work practices)

Emotion-enabled decision making

Each of the greyed circles is explained in more detail below.

1. Emotions explored for understanding of self-in-situation

a) Anger, jealousy and resentments about how treated at work

Patricia felt jealous and exploited: exploited as she had consistently worked more than her contracted hours, doing a job that carried more responsibility than the grade she was employed at; jealous as other members of staff in the Centre that she felt did less work and took less responsibility than she did but were paid better. Her resentments about how she had been treated were many and strong. She resented the extra time she had put in without adequate recompense, recognition or support from the personnel department, and resented other people within the Centre that she felt weren't as proactive as she was in their work. She, and other members of the Centre, had had a love/hate relationship with the ex-director. He was charismatic and exciting but had little idea of the extra work he generated for the administrative staff, this work often resulting from his failing to respond to messages that carried news he didn't want to know about. He had failed to monitor the finances, and left the Centre as it went into deep financial trouble. His charisma had carried the department along on a high, but he had also left a trail of anger and resentments when things turned sour.

b) Pride, care, and enjoyment through work

It was not all jealousy, resentment and anger. Patricia enjoyed the people she worked with, the researchers she catered for, and the continuous personal interactions that were part of her job. She felt loyal towards her fellow staff. Patricia was proud of the work she had done, believing she had created a friendly welcoming atmosphere, provided well for the researchers and other members of staff by having a 'can do' problem-solving attitude, and saw herself as responsible and competent. She was proud of being able to deal with many different and challenging tasks at once. A thought experiment into counterfactual emotions which asked Patricia to imagine what she would feel about her post if the problems had not arisen confirmed her positive evaluation of much of the work of her post.

c) Guilt and regret and resulting worries about own capabilities for work and others views of own capabilities for work

Her emotions revealed a third side to her situation too. She felt guilt over the financial problems the Centre had run into, wondering that if she had prioritised keeping an eye on the financial situation then the Centre would not have its current troubles. She did not think that this was really her job but was also frustrated with the lack of clarity over who was responsible for what. Prior to the current crisis, Patricia had proudly seen herself as a 'shit-hot' administrator but now felt that her confidence had taken a huge knock, and wondered whether a brighter person could have seen the financial problems coming. She would be less trusting in future. Because of her view of herself, she felt worried that she would not be upgraded, as she would not be seen as worthy. She had taken the initial steps recently to apply for an upgrade but had stopped. She explained that if she were to be turned down she would have the suspicion that this would be because she was perceived as to blame for the problems in the Centre. Before the dent to her confidence she would have not worried about being turned down as she would have interpreted this as being due to financial restrictions, but now she feared this as a judgement by others upon her ability. This lack of confidence was one of the factors that had also stopped Patricia from actively pursuing other work; while she worried that the job market was not good and that her age would count against her, more specifically she did not feel able to put on a front of confidence in interviews.

d) Worries about being unduly influenced in the decision

Finally Patricia worried about making her decision in response to outside influences. Her partner was pressuring her as he believed that she was being exploited by the Centre as she was working so many extra hours, and being employed below her proper grade. He thought she should not put up with this.

2. Emotions explored to help build list of enlightened values

Through reviewing her emotions and other value activities Patricia identified twelve values she felt where at stake in this decision. She explained, *"I found the concept of values very useful – it helps me to work out what the important things are for me and not allow my judgement to be clouded by what other people say or what I think they would say. That is although I still catch*

myself thinking about other people's values I am now much more aware of doing this and can bring myself back to the question of what my values are".

These values included being competent, loyalty to colleagues, a sense of mission and being realistic and responsible. In the pre-session questionnaire, Patricia had written that one of her most important objectives was having a sense of self-respect. Explored in the session this emotion was about being loyal to her colleagues by not deserting a potentially sinking ship, and by feeling that she was competent in her job.

3. Emotional change from reassessing emotions

b) Validation of past feelings of guilt and regret allowed moving on…

Part of the session was devoted to exploring Patricia's emotions about the past. The examination of her feelings of guilt and regret about the difficulties the Centre had experienced seemed to have been particularly important to her as *"[e]xpressing regret/guilt about past…enabled me to validate it as part of my feelings".* As a result of this *"I came away feeling that my emotions and values (even if not necessarily rational) had been validated. Having owned the above rather than having an inner debate about them I felt able to move forward positively."* Patricia wrote that being able to *"acknowledge [the] existence and validity of my own feelings and instincts"* was *"helping me to see how important the arguments for and against this and that REALLY were for me".* A similar point was made in the claim that *"[p]rogress enabled me to decide which of the factors which had been going through my head over the past months and confusing me were really relevant to my decision"*

…and determining what was at stake in the decision

So which factors were really important? Patricia wrote that the session helped in *"[r]ealising that certain arguments although logical and acceptable were not critical e.g. age and job market. [I] separated them out from things that were really important to me and seeing them as much less critical [sic]. They were in a sense other people's positions or the rational position but not mine."* Plausibly this can be interpreted as Patricia had previously thought the decision hinged upon issues about her age and the job market (could she get a good job?) but she came to see it as more importantly related to her view of herself and her loss of self-

confidence connected to her guilt and regret over the fortunes of the Centre (was she worthy of a good job?).

b) Emotion thought experiments

Patricia was asked to engage in various thought experiments during the session. Asked to imagine how happy she would have felt working in her current job if the difficulties with the Centre had not occurred revealed the many positive values that Patricia derived from her job. Asked to imagine that she had become an official centre administrator and to look back from her retirement to assess the satisfactions the job might have provided she imagined that she had worked in an academic area of interest to her, in a small, well-managed department providing a good service to an appreciative group of researchers. She had made order out of chaos, put her own mark on the post and the work had provided a variety of activities. Performing the same thought experiment for working as a PA, another option she was considering, she imagined that she had limited responsibility letting her get home by 5:30 but wondered if she would be less satisfied as she would not have had a sense of achievement through overcoming challenges, and thought there was a danger to of being relatively isolated through working for just one person.

Patricia considered imagining how she would feel in the future to have been a useful guide to her decision making. She commented on this three times, a representative quotation being that *"[h]ow I would feel in the future [was] very revealing to me"*. This emotional imagining of the future seemed to be particularly connected to how she would feel about herself through coping with the challenge of staying at the Centre. Patricia wrote that she came to realise that *"coping with present immediate future would be a challenge…[and that] it could be a good learning opportunity and if I succeeded it would boost my confidence."*

4. Emotions clarify and confirm the choice

a) intuitive choice

After these thought experiments Patricia said she had made her decision intuitively - she wanted to stay at the Centre, at least for a while. Her decision was not simply intuitive but based on the values and emotions explored; she explained that the choice of staying at the

Centre would allow her to regain her self-respect as an administrator, and stay loyal to her colleagues, while having new challenges[xiv].

b) relief in the choice

By the end of the session Patricia came to a decision about what she wanted to do, a choice confirmed by a sense of relief: *"I was clear about my decision when I left the interview and felt relieved about having come to a decision".*

5. Plan for how to combat emotional difficulties

An outstanding issue from the analysis of her emotions about herself in her situation was the pressure she felt from her partner's dissatisfaction with how she was being treated at work. Patricia thought about what she could say to him about her choice that he would 'buy'. She would explain that she wanted to stay in her current position with the Centre as:

> - This would help her build up her confidence, so she would be able to move forward as an administrator
> - She would be being loyal to her colleagues
> - She would learn to prioritise to help with the work and time demands
> - She was determined to limit her attendance to the formal 35 hours/week
> - After a year at the post she would feel on top of her job, and would have learnt from her experiences

Other negative emotions that had been plaguing her she thought she could deal with in a variety of ways. To deal with resentments she would remember the AA serenity prayer and distinguish between those things she could change (her work methods and priorities) from those outside her control (the current ability of the Centre to pay her more). She would change her comparison reference group; rather than feeling jealous of others in her situation better off than her she would feel gratitude by comparing herself to those worse off (administrators in other institutions who had an even worse position). By regaining her confidence she would be in a position to either make a bid for better pay and recognition at the Centre, if and when it picked up, or she would be able to apply for jobs elsewhere without having the nagging doubt about her abilities and guilt at the back of her mind.

6. Emotional change: Increased confidence in decision and decision-making process

Patricia identified the following key events:

Key event	How it helped
How I would feel in the future	Very revealing to me
Expressing regret/guilt about past	Enabled me to validate it as part of my feelings
Realising that coping with present immediate future would be a challenge	Realising it could be a good learning opportunity and if I succeeded it would boost my confidence
Realising that certain arguments although logical and acceptable were not critical e.g. age and job market	Separated them out from things that were really important to me and seeing them as much less critical. They were in a sense other people's positions or the rational position but not mine.
Looking at all aspects	Things fell into place particularly 4 above

Patricia was surprised to find a resolution to her decision dilemma: *"I didn't come to the Progress interview with high expectations because I thought the issues (around my current work situation and what I should do about it) were too convoluted and complicated for me to be able to come to a decision and expected that I would end up rather in the hands of fate and not make a clear, decision but I ended up making a decision which was satisfactory both to my need to sort things out in my present job and my desire to move on to new challenges where I could put my past experience to good use rather than undersell myself in a bid to escape from an uncomfortable situation"*

An additional positive outcome from the sessions was an increased sense of self-efficacy. Patricia wrote that *"[i]n a sense I came away feeling able to take charge of my destiny and in a sense capitalise on events of the past rather than being a victim of them"*.

In the follow-up questionnaire explained that *"I feel more confident about what I do – although I am aware that there is still room for further improvement/development"*. This perception of her worth also seemed shared by the Centre as she also noted that *"I succeeded in getting my post regraded and my salary substantially increased"*.

3.10 Cases 8, 9 and 10

For the final three cases a briefer analysis will be presented. For these cases there was less data recorded in the questionnaires and from the session, making a more complex analysis of the role of emotions harder to sustain.

Case 8: Abby

Brief background

Abby described her decision thus: *"I want to decide my career path: eg whether to try to do clinical psychology, or counselling psychology, or other academic pursuit, or journalism, or even accountancy (!)."*

Decision difficulty

Abby perceived that the decision has been hanging over her for the last few months and that she was thinking about it at least once a day. She was finding the decision hard *"because my choice will have a strong impact on my life for a rather long period of time."*

Summary of the participant's evaluation of the process

In the post-session questionnaire Abby judged that she had a lot of confidence in her choice. At follow-up she reported that she had given up pursuing clinical psychology because of perceived difficulties of getting on the course, and had switched to forensic psychology, a choice she expressed she was somewhat satisfied with as *"I feel like I am just experimenting it to see what it feels like to work with prisoners rather than making a decision on it"* and had no regrets as *"[i]t seems like the best I can do at this time"*.

She judged at both post-session that the procedure had helped a lot and in follow-up rated that the procedure had been good in its helpfulness, commenting that *"[i]t helped me realise that the other choices weigh more or less equal to each other, and it was the practicality of carrying them out that made the difference."*

Exploring emotions

a) Emotions about her place in the world: anxiety about shortening time and diminishing prospects, restlessness and existential guilt

Abby stated that she had felt anxious over the last four or five years as *"time is running out because of my age"*. She perceived that her prospects were diminishing as she moved into her thirties, a worry she assessed as mostly appropriate. Abby felt restless as she was not rooting herself in one profession or place, but rather *"floating around – going nowhere"*.

A particular concern was the possibility of getting on the training course for clinical psychology, as she believed that once over 35 prospective applicants are not considered at all. Abby had managed to gain an assistant psychology post which is a step towards training in clinical psychology but was anxious that this was diverting time if she didn't get onto the highly competitive clinical training. On reflecting about this emotion she considered that the work experience would also be relevant for her other options of forensic or counselling psychology, and would provide at least a foot in the door.

This anxiety was also linked to existential guilt that she was feeling about time that she had wasted. Her previous studies had been in philosophy, which she pursued out of interest rather than from a career perspective, although she did think she would still do the undergraduate degree if she had her life again, but regretted the time spent on the Master's degree.

b) Envy of others who are getting on

Comparing herself to others she envied them for already having a career, a family, a car and so on. This emotion she said she did not normally 'do' but when she did it was very intense. She also felt guilty and ashamed of herself for not being able to buy things when she compared herself to university peers who she perceived to be getting on.

c) Worries about failing like a friend

She did worry she would turn out like a friend on the psychology conversion course who didn't manage to finish the course, didn't have a certificate, was now older, on benefit and had financial difficulties. But would she fail like this? Reflecting on the appropriateness of this

emotion she reassessed this comparison as not entirely appropriate as she had her passed her conversion course, had two degrees and relevant work experience.

d) Worries about being good enough and not fitting in

She did worry however about whether she was good enough to get into clinical psychology, a worry she assessed as appropriate as she did not have a 1st class degree for a very competitive course, a worry she had also, although to a lesser extent, for forensic and counselling psychology. She was also worried that clinical psychology might not suit her as it was too wedded to the 'medical model'.

e) Worries about repeating previous mistakes in decision making

She was moderately worried that in her decision making she would repeat what she saw as a previous mistake when she had pursued engineering as a career as she was *"thinking about its career consequences, rather than if I'll enjoy it"*. This worry she interpreted as providing guidance about how to make her current decision, as she needed to find out more about her current options. She thought she was better placed than before as now she had *"learnt that I want to do what I really care about"*.

Assessing the role of exploring emotions

Abby wrote that that the procedure helped her with the emotional side very much as *"it certainly has helped me clarify my emotions which at times seem quite opaque to me"* and that *"it helped me to step back and to view my self from a different perspective whereby a better self understanding was obtained."* In particular Abby commented that *"it was very interesting to be pointed out that I suffer from existential guilt"*.

What to make of this? In terms of her recent choices prior to coming for the session, it is plausible that concerns about existential guilt, restless, lack of rootedness, foreclosing options and envy led Abby to re-evaluate where her life was going and to take the conversion course in psychology to open up new career paths. Now, although only at the stage of working as a psychology assistant, it is possible that these emotions were leading her to believe that she needed to definitively choose between the options of clinical psychology, counselling

psychology and forensic psychology (or alternative career paths). Given that she was not entirely sure that clinical psychology as an option would suit her, nor that it was possible to get onto the training, keeping her options open while finding out more and gaining relevant experience seemed a very sensible solution, and one that might have been harder to realise without the increased emotional understanding she developed.

Relevant to this it is worth noting that she originally listed in the pre-session questionnaire a value as being rooted, but on reflection modified this to also include the possibility of changing, if an option was not suited to her. She identified as the most helpful outcome of the session that, *"I was unaware of my need to keep all my options open and that choosing clinical is merely a means for having my options open. Thus, in a sense I haven't made my decision, I merely postponed my decision by choosing something that would allow me to make the decision later on. I guess it's fair enough given that I need the relevant experience in order to tell whether a certain option is really what I want to do."*

Case 9: Becky

Brief background
Becky put her decision this way: *"I want to make correct and reasonable decisions about my life and the way it will change in terms of studies, work and place of residing. It's a vulnerable stage I am into right now, I want and am waiting for many things to change since I have worked towards this way."*

Decision difficulty
Becky saw the decision as hanging over her for almost a year; this was because she was not sure at first that she wanted to *"go for it"*, she was trying to convince her parents of her wish to pursue a masters course in the health field and live far away from England, she needed to save money for the tuition fees, and she was trying to get over personal problems.

Becky thought about the decision every day, giving a total of *"365 hours at least throughout one year."* She rated making the decision hard.

Summary of the participant's evaluation of the process

In the post-session questionnaire Becky wrote the sessions had helped a lot, and looking back from the follow-up questionnaire that the usefulness of the process had been good. She stated that it had only helped a little with the emotional side.

She stated that she had complete confidence in her decision, a choice at follow up she had a lot of satisfaction with and a few regrets about missing friends and family.

Exploring emotions

a) Bad feelings from the past (disappointment, depression, exhaustion), gradual recovery and eagerness and excitement for the future

Becky recently experienced problems in three areas of her life; her studies, her work and personal relationship. She wasn't happy with her previous Masters course which she found disorganised, her work was not relevant to her areas of study which left her feeling disappointed that she was not developing her potential and using skills, and her relationship with her boyfriend broke down in a very painful way. All this left her feeling *"psychologically exhausted"*, and *"shattered deep inside"* such that she felt *"I totally lost myself and even felt depressed";* as a consequence of these difficulties she saw herself as *"sooo amazingly eager for things to change as soon as possible."*

After this period she started to gradually recover and have some fun with support from her friends; she had stayed at her parents' although there was ambivalence as it was also hard to cope with living with them again after years of independence, which led to many quarrels, and she felt fed up that she was wasting time as her ambitions were not being pursued. Although she felt frustrated and angry about being stuck she was also very excited and happy at the prospect of being accepted on the health course.

b) Doubts about the favoured choice and a desire for parental approval

She expressed uncertainty and doubt, as she perceived a lack of support in her choice to pursue the health Masters from one of her referees (who wondered whether she might be better doing

something more closely related to her previous studies). She was also disappointed at being turned down in her initial applications.

She was further disappointed by a perceived lack of support from her parents and sometimes felt angry at them because of this; she anticipated feeling happy telling her parents how well she did when she succeeded. She clearly was influenced by her parents as she admired her father as he loved his job and had made something of himself. Nevertheless she did not want to be over-influenced by her parents and expressed that she felt sorry for a friend who chose a career he hated because he had studied only what his parents had wanted him to.

c) Doubts about practicalities

Becky also had concerns about practicalities, in particular financing the course, and felt stressed about *"how I will be able to manage working all things out and having as much of parents approval as possible at the same time"*.

Exploring emotions

Disappointingly (for this writer) while Becky seemed to have benefited from the structured nature of the process in sorting out her values and options it is less clear that she was helped so much on the emotional side.

Becky identified as the key moment, *"[t]he detailed structure of the questionnaire and having to answer each question carefully"* as this *"allowed me to organize my thoughts and goals, and also ways to assess ways that lead to the best decision."* The ingredients in the decision were already largely known to Becky but the added-value of the structured process was enabling her to sort out the different aspects; *"I was already aware of the situation and my options, but they were kind of mixed up in my head [and] the conversation at the meeting really cleared things out for me"*. Part of this process of clarification was that *"[t]he conversation at the meeting categorized my choices and made me more aware of each of their exact pros and cons. Thus, it allowed me to distinguish between what could be a best and a worst decision for me."*

On the emotional side she wrote that *"[i]t generally does not deal with any psychological/emotional issues ... It would have been nice if it could somehow stress out such points"* and *"place a little more emphasis on if and how emotions [are] promoting or hindering the decision, for either the right or wrong reason, and how to stop this if one has to"*.

The question is what does this mean? One possible interpretation is that the negative feelings she experienced connected to a recent, difficult past were not dispelled. Evidence for this interpretation is provided by the comment that, *"I did not automatically overcome my feelings of disappointment at myself or slight despair towards the situation, until I actually started working...; work has revived me in a sense, since it has been giving me the opportunity to make one step forward, use my skills, and make the most of my time here... Even more excited I have grown at the thought of starting my new job..., which has made me feel so happy and proud of myself."*

Asked in an email for clarification what she meant by the lack of help with the emotional side Becky replied that *"[i]t's a combination of ... bad experiences that perhaps I still haven't got over them completely yet, plus having trouble motivating myself primarily because I feeling under pressure by parents and others' demands (e.g. to please parents' wish, or to save for [the course], or to make the right decision for myself and my future, etc.). It's mostly a motivation issue though."*

There was at least some emotional movement as Becky commented that the sessions helped here go from stewing on her negative emotions to working on her difficulties as the sessions, *"[k]ind of reduced the stress, in the sense that I was motivated to work on my choices and reaching to some decisions, rather than keep thinking about the whole thing as an abstract problem and ruining my mood without any real outcome."*

Also the sessions *"helped me realise my true feelings towards options and situations"*. Perhaps connected to this Becky did state the sessions helped her understand her values a lot explaining that *"[i]t enabled me to weigh the value of fulfilling my ambitions and dreams on the one hand,*

and considering my parents' opinion and wishes on the other hand" and "*made me realise that I cannot cross out neither of these; which means that I need to find a good balance so as for both parties to be as pleased and happy as possible.*" To this extent the procedure "*provided me with some reassurance that yes, the pros for the decision I'm making are many more than the cons.*"

Case 10: Simon

Brief background

Simon framed his decision in a completely open-ended way as "*I want to decide…about my future career*".

Decision difficulty

Simon saw himself "*in a dead end job…going nowhere and … stuck*". He has been hoping for a career in accountancy and finance since he graduated several years ago. Despite making many applications for posts they have all been in vain, and he felt "*frustrated and troubled mentally as a result*". He had been given feedback that he lacks confidence in communication. He has talked to a number of career advisers and "*taken their advice on board but nothing has been harvested from my efforts*". Having tried many different strategies without success he is "*persevering but my morale and motivation is running low.*"

This decision had been hanging over Simon since he had graduated a few years earlier and he thought about it at least once a week. Simon estimated he had spent a total of 3650 hours thinking about the decision. He rated the decision as hard because of his lack of success; he felt that he was "*running out of solutions, close to surrender*".

Summary of the participant's evaluation of the process

In the post-session questionnaire Simon wrote the sessions had helped very much, and looking back from the follow-up questionnaire that the usefulness of the process had been very good. He stated that it had helped very much with the emotional side, explaining the sessions "*[r]estored interest, rocketed confidence and self-esteem, worries and anxieties dissolved.*"

Simon stated that he had complete confidence in his decision as *"I put a lot of thinking into different career options"*, *"[t]he emotion, virtues and the nature of work was taken into consideration"* and *"[t]he career matrix helped me to clarify my decision"*, a choice at follow up he was completely satisfied with and he had no regrets.

<u>Exploring and reassessing emotions</u>
a) Anguish about the future, frustration and anger about the past and discouragement about the present
Simon expressed that he was anxious and anguished about his future career and *"things not working out"*, and that he felt discouraged and frustrated, and exhausted and demotivated after filling in so many applications without success. Dealing with the negative feedback made him feel angry and desperate.

b) Developing hope
At times he was also hopeful and had increased confidence when he made applications which were based on a carefully analysis of the criteria. On reflection he noted some improvement as he had moved from not getting interviews to getting interviews, although he was still not getting any offers of jobs. He felt like he'd exhausted all the strategies that had been suggested by his career's advisors, for example psychometric testing, and exploring websites. Simon had not read Bolles' <u>What Colour is Your Parachute?</u>, a book that suggests many different avenues for pursuing work and he agreed to try this. One strategy suggested by Bolles is using contacts. Simon expressed that he felt embarrassed about asking his university colleagues for help in finding work, as he was ashamed at not being able to reciprocate. On reflection though he realised that in University they had worked together as a team, and he had helped them out on occasions.
Simon's emotions revealed he had become discouraged, demotivated and exhausted, with his self-confidence flagging. As a result of reflecting upon these emotions Simon identified what matters in making the decision as:

> - I should be confident of my abilities, skills and experience
> - I should be making at least 3 applications a week.
> - I should keep trying.
> - Consider diversifying into other possible areas

c) Reframing and using envy to develop virtues

Unsurprisingly Simon felt envious when he compared himself to his colleagues in prosperous jobs, feeling a failure by comparison. On reflection Simon considered he could be happy for them (an emotional reframing suggested by Russell (1930/2006) who advocates changing envy to admiration), and use their success stories as something to learn from (for example that they were good at networking). He considered other strategies he could use such as taking courses on speaking, writing, and personal effectiveness to work on his weaknesses.

d) Evaluating money worries

Simon was worried about not being able to pay back his student loan. On reflection he considered that this worry was more relevant to the future than now as there was no interest on the loan. Given this he should focus on finding a job and getting a good income. Simon hoped that gaining a postgraduate qualification would increase his employment prospects although he also worried about the financial implications.

e) Finding virtues to counteract the influence of anger and disappointment

Simon was concerned that his anger at his current situation might affect his performance at his current job, and that others might find him acting strange when he was in a bad mood. On reflection Simon found aspects of his current job (working in a store) that he liked and noted that he was developing his transferable skills, showing a good work ethic, making friends, and serving/helping people with a good product. On the positive side Simon also recognised that he felt proud about persevering despite the difficulties, and proud about gaining what he felt was a good degree, and being the first person in his family to attain that level of education; he was proud of overcoming obstacles.

f) In summary

In answer to whether the process had hindered in any way he stated it had not hindered at all, and after noting that it requires a lot of time wrote that the *"invaluable knowledge that Progress gave me, far outweighed this and so made up for the use of my time 10 times over"*. He summarised the key moments as:

Key moment/insight/question/event	How it helped
The matrix	Weighed different careers
What colour is your parachute	Different job search strategies
One to one session	Helped me with the emotion and virtue dimensions
The questionnaires	Put a lot of thought into the selection process

3 Some conclusions from the cases about dealing with the emotional side

These cases provide some initial evidence that the procedure provided help with the following aspects of the emotional side of decision making:

3.1 Use of emotions in gaining perspective on the self-in-situation

Early in the procedure, in the stage 'understand the situation' and 'decision', considerable time was given to mapping, exploring and examining participants' emotions about their self-in-situation. Reviewing the cases shows that, although different participants tended to focus on different aspects, these emotions fell into the following categories:

> i) about the participants' past as they reflected on factors that had brought them to their current situation
>
> ii) their experience of their current situation
>
> iii) their hoped for and feared possible futures, and
>
> iv) their capacities to cope with envisioned changes

Many participants expressed anxiety that involved doubts around their capacities to realise options they were considering. It seems likely that mapping these emotions increased participants' understanding of their situation and decision[xv], and provided material that was used throughout the procedure for contemplating different aspects of the decision.

3.2 'Unembracing' emotions and resultant emotional change

Many participants also seemed to undergo emotional changes, as a result of re-assessing the emotions around their self-in-situation, with changes that positively impacted their decision making. For example, in case one the participant re-assessed (a) her guilt through realising that she did not embrace the value judgment that she did not deserve another chance to change career implicit within this guilt, and (b) her worries that is seeking another change she was being an inconsistent person (a 'flibbertigibbet') through the development of a coherent and explicit set of values that showed that she was in fact consistent ("*Creating a list of what is important to me [enabled me to see]… consistency in myself when I was worried that my desire*

to change career indicated a lack of consistency"). In case two the participant reassessed the implicit judgment of inadequacy in the shame about previous educational failures. In case three the participant reassessed the challenge to her pride and shame that trying the Masters degree and then not coping with the work load implied. Case four is more ambiguous as the participant reassessed her anxieties about being able to cope with the demands of teacher training although in this case her original assessment seemed to have been more accurate in the long run. It is possible that more could have been done to manage the emotional difficulties in carrying out the choice for this participant as for case nine (see below).

3.3 Evaluating emotions impact to better regulate the decision-process

In case two the participant commented explicitly how exploring emotions impacted on the regulation of his decision-making process. He came to realise that he was *"not too desperate"* in his current situation and would avoid making a decision on the basis of a passing mood caused by the odd bad day at work. A similar point about the problem of relying on potentially passing feelings was made by the participant in case one who identified as a key factor in her decision making coming back for a second session which *"[h]elped take into account whether my feelings or circumstances had changed over time."* Case nine perhaps did not focus enough on this and the participant, who felt the procedure only helped a little with the emotional side, wondered about what impact her current emotions were having compared to any future emotions.

3.4 Using emotions in problem-solving difficulties in the current situation

An unexpected, but prominent feature of many of the decision-making sessions was problem-solving difficulties in the participants' current situations. For example in case two the participant's emotions of anger and frustration at currently working below his abilities suggested that he valued and would be more satisfied with more demanding work, and his enjoyment and pride with the translation work suggested a means for meeting this value. Case ten can be seen as almost exclusively focused on reframing emotional difficulties to problem-solve the current situation.

3.5 Using embraced emotions in building a list of enlightened values

The procedure sought to help participants build their list of enlightened values through identifying the value judgments implicit within the emotions of the self-in-situation. This aspect of the procedure seemed to work well, and many participants' also seemed to find additional insight through the directed questions asking about who they admired or felt sorry for. An additional finding was that exploring and assessing emotions also led to the rejection of certain values. For example in case one the participant came to reject many of the value's in her 'glamorous' job, when she realised that she felt sorry for a colleague who she saw as trapped in the job. Many participants, in common with the participant in case three, came to reject, or at least downgrade, the importance of the value of pleasing others implicit in shame, although in case nine the participant also recognised that she wished on reflection to take others perceptions, at last to some extent, into account.

3.6 Using emotions in directing information search

Perhaps the opposite emotion to feeling confidence in a choice is to feel anxiety. Participants' anxieties were used as information for how participants' values might be at threat and the intentional object of the anxiety used as a guide for factual questions that needed investigating. Thus in case one the participant's anxiety about the costs and prospects for a desired career were used to direct the information search, a pattern repeated in numerous cases. Key to this search process is moving from 'stewing' in emotions.

3.7 Using emotions in cross-checking the more deliberative process of choice

While the emotions of the self-in-situation were explored for their implicit value judgements to build a list of the participants' enlightened values, emotions about the choice were also used to enable the participants to have an emotional check on the more deliberative process of using the values/options matrix to determine how well the options were likely to realise their identified enlightened values. This was based on the assumption that if participants were not excited by their choice this suggested that either important values had not been captured or the participant had doubts about realising the choice. Analysis of the data suggests that in fact participants were using a much wider range of emotions in assessing their choice than just excitement – these emotions included a sense of being pleased, relieved or surprised at finding

a resolution to a decision they believed had no good resolution, a reduction in 'wavering', a sense of calmness at coming back to who they were, as well as increasing excitement at the prospect of implementing their choice.

3.8 Using emotions in refining the choice

Feedback from the participants suggested that they refined their options through reflecting upon their emotions. In case one the participant refined her decision after the session to better capture her previously identified enlightened value of promoting social reform as her admiration of others suggested a means to realise this value. In case three the 'middle way' provided a path through her worries, and in case four anxieties were used to suggest a range of different flavours to the teaching option.

3.9 Using emotions in realising the choice

Many of the cases required working out how to deal with troubling emotions that might derail the choice. While it was expected that anxiety would be the main emotion that would provide information for possible barriers in realising the choice, the data suggests that anxiety about the future and coping were certainly a factor but a much wider range of emotions were used to point to possible barriers. In case one the outstanding 'niggles' that needed combating included regret, self-doubt, the need for approval and guilt, in case two it was frustration and shame from past studying experience, and in case three pride and shame.

Notes:

[i] Further criteria were identified. This subset is selected as this is where most data is available.

[ii] One participant did not answer this question.

[iii] There was no data on regret for one participant. The score for satisfied was double counted for this participant as his score was the mode for the question in satisfaction.

[iv] There is no definitive answer to the question of when is the best time to measure satisfaction given that the consequences of a decision stretch indefinitely into the future. After the decision has had time to be realised and before unpredictable circumstances intervene too much is the most precise answer that seems possible.

[v] This tendency to express thanks rather than give an honest evaluation was also sought to be reduced by framing the participants as co-researchers rather than simply as beneficiaries. As explained in the procedure section participants at recruitment were told the procedure was under test and what was wanted was their evaluation of what was good and bad about the procedure, and the questionnaires re-emphasised this by asking participants to answer questions "as accurately, fully and candidly as possible", that "[w]hat is most helpful to us is your honest and candid feedback, not you telling us what you think we would like to hear!" and by stating that "[t]he Progress Research Project thank you for your honesty and co-operation".

[vi] Reported to the researcher after the follow-up questionnaire. This case is examined in more detail later.

[vii] This is the participant whose values are listed above.

[viii] This case is analysed in more detail later.

[ix] Although given the findings from this research that emotions sometimes undo otherwise wise decisions this points to where the procedure needs to be developed. The participant who commented that the procedure should find ways to "recognise their potential importance, and investigate them more: ways to cope with them, or perhaps a recognition that I would never cope with them" is surely correct.

[x] Further evidence is provided in the next section where detailed changes in participants' understanding of their decisions is presented and analysed.

[xi] Other participants also talked to people in the careers they were considering, a suggestion often made within the decision-making sessions as a way to find out more about these options. These participants didn't specifically refer to this help in their answers to these questions.

[xii] See the section on values above and the next chapter for more details about how the procedure helped with this

[xiii] Identifying information about the participants has been changed.

[xiv] This was a short cut of the procedure by the participant – rather than completing the full value option matrix the consultant checked the intuitive choice against the values previously identified by the participant. This showed that her intuitive choice aligned with the more deliberative task.

[xv] See the comments recorded in the previous chapter.

CHAPTER EIGHT: Discussion

Chapter Contents

1. Overview of the theory: emotion-enabled structured decision making

It is a fundamental assumption of this research that humans need not be controlled by their emotions but can, at least to some extent, stand back and reflect upon how they make decisions, and the role of their emotions in their decision making. In this reflective process humans can identify where their emotions might (a) impair decision making and seek to counter this influence, and (b) aid decision making and seek to take advantage of this possibility.

Being able to successfully use emotions in this way depends upon an accurate understanding of the nature of emotions and how they function. Emotions can hinder wise decision making through appraisals that are mistaken, partial, distorted or transformed, and through prompting decision-makers to over-hasty, imprudent action based on unenlightened values or foolish inaction through seemingly endless rumination. On the other hand, emotions can help by orientating decision-makers' to the implications of the on-going situation they are facing to the realisation of their enlightened values and goals, enabling them to deal appropriately with threats and opportunities, and motivating needed action.

Because emotions can be either functional or dysfunctional, the proper perspective for wise decision-makers to take to their emotions is to consider them as fallible resources; rather than either simply following or trying to ignore their emotions, decision-makers should seek to become aware of their emotions and their emotions' influence on their thinking and behaviour and 'mine' and assess these emotions for the potentially important (but fallible) information they contain – for example, on reflection, does the decision-maker consider the goals and values implicit in their emotions' appraisals to be enlightened, and, if so, what might be the most effective ways of realising these goals and values?

Various theorists have proposed structured decision making models for improving decision making. All these models share in common an analysis of a decision as consisting of a set of components that can be sequentially ordered with tasks the reflective decision-maker can carry out to realise the goals of the different components. The components of a decision are: a

decision-problem embedded in an *on-going situation*, with *values-at-stake,* possible *options* whose *uncertain consequences* might differentially realise these values-at-stake, the *choice* of an option, *acting* upon this option, and a *review* of the success of the choice in realising enlightened values with *modification* of the choice as required.

If, as argued, emotions are fallible resources for reflective decision-makers to use, it possible to include emotion-based tasks within the structured decision-making model, with different uses of emotions tied to different components of a decision – in other words specific emotion-based tasks to understand the situation and frame the decision-problem identify values at stake and potential options, choose an option, act and review. Based upon the theoretical analysis of emotions and the nature of a decision, an emotion-enabled, structured decision-making procedure was developed, and subsequently tested.

2. Summary of the main findings

Research was carried out by repeated application of the Hermeneutic Single-Case Efficacy Design to ten separate cases, with quantitative and qualitative data collected and analysed against the criteria for good decision-outcomes and process-outcomes identified. This data is summarised below.

2.1 Decision Outcomes:

Criteria 1: A good decision is one that the decision-maker considers to have been worth the time and effort of making

Participants had spent considerable time before the sessions contemplating their decisions (an average of 2,826 estimated hours per decision) without reaching resolution. All participants commented positively on the help the process provided and five out of ten participants spontaneously commented on the amount they gained in comparison to the time spent in the decision coaching. For example one participant wrote, "*[i]t has helped me in coming to a decision quicker…it required a lot of my time but then again I'm not sure this was a hindrance as the big bonus, which is the invaluable knowledge that Progress gave me, far outweighed this and so made up for the use of my time 10 times over.*"

Criteria 2: A good decision is one in which the decision-maker believes their conflicts have been acceptably resolved

Eight participants came to a decision as a result of the coaching, with the other two moving closer to a decision. All participants' answers- except one - indicated that their level of confidence had increased after the sessions; this increase in confidence was statistically significant (Wilcoxon signed ranks test, $Z = 2.577$, $p < 0.005$ for directional test and $p < 0.01$ for non-directional test).

Assuming that assessments of 'satisfaction' with the sessions and 'helped overall' are closely related constructs, it is possible to compare this data to results in Omer and Dar's (2007) study

where participants were asked to express their satisfaction with the two types of decision counselling compared. Omer and Dar found on a 10-point scale that assessments of satisfaction post-session was 8.67 (1st protocol) and 8.62 (2nd protocol) and at one month follow-up 8.00 and 7.75. If 'very much' is taken as equivalent to a score of 10, and 'a lot' a score of 8, the overall scores for this study compared favourably with 9.2 post-session and 8.4 at follow-up.

Criteria 3: A good decision is one upon which the decision-maker acts

All the participants indicated that they acted on the basis of the decisions they made during or following their sessions.

Criteria 4: A good decision is one that has outcomes the decision-maker is satisfied with

At follow-up participants expressed satisfaction with their decision, and few regrets, a pattern that was statistically significant ($X^2 = 19.5$, df = 4, p < 0.005 and $X^2 = 9.8$, df = 1, p < 0.005 for the more stringent test). At follow-up it seemed likely that one participant was struggling to realise her decision and this participant was contacted later when it was determined that the decision did not work out well.

Criteria 5: A good decision is one that has outcomes that realise the decision-maker's enlightened values

The data is broadly consistent with this, but there is not sufficient data collected on how well the decision realised the enlightened values the participant had identified in the session and whether the participant still embraced these values for a more confident claim.

2.2 Process Outcomes

Criteria 1: A good procedure has been generally helpful

All ten participants rated that the procedure had helped 'very much' or 'a lot' in both the post-session and follow-up questionnaire. This pattern of answers was statistically significant at both post-session ($X^2 = 16$, p < 0.005 and $X^2 = 10$, p < 0.005 for the more stringent test which summed data into two categories [i]) and at follow up ($X^2 = 24$, p < 0.005 for the less stringent test and $X^2 = 10$ p < 0.005 for the more stringent test).

Summing answers to all questions about how much the procedure helped across different aspects of the procedure (generally, with understanding the situation, with clarifying enlightened values, with choosing an option and with the emotional side) also was statistically significant ($X^2 = 59.46$, p < 0.005 for the less stringent test and $X^2 = 35.26$, p < 0.005 for the more stringent test).

As a cross-check participants believed that others would benefit from the procedure ($X^2 = 12$, p < 0.005 and $X^2 = 3.6$, p < 0.1 for the more stringent test) and that they would use the procedure again ($X^2 = 8$, p < 0.005 and $X^2 = 3.6$, p < 0.1 for the more stringent test). When summed this data reached statistical significance for both the less stringent and more stringent tests ($X^2 = 18$, p < 0.005 and $X^2 = 7.2$, p < 0.01 respectively). In their qualitative responses, seven out of ten participants chose unprompted to comment on the helpfulness of the structured nature of the procedure. For example, one wrote that the procedure was, *"[e]xcellent. Practical, logical and helpful…a "system", taking everything into account."*

Criteria 2: A good procedure has helped with specific aspects of making a decision

Criteria 2a: Understanding the situation and framing the decision

Although the quantitative data suggest that the procedure helped participants understand their situation and frame their decision ($X^2 = 12$, p < 0.025 for the less stringent and $X^2 = 12$, p < 0.1 for the more stringent test), analysis of the qualitative data where participants explained their quantitative evaluations suggest that this question was not well understood as participants commented on a range of different aspects of the procedure.

Criteria 2b: Understanding what matters

The quantitative data suggest the procedure helped the participants to build a list of enlightened values ($X^2 = 13$, $p < 0.025$ for the less stringent test and $X^2 = 6.4$, $p < 0.025$ for the more stringent). This is confirmed both comparing the richness of the list of values that participants generated before the procedure with the list they developed through the procedure and by a qualitative analysis of the comments that participants provided. For example, one participant commented, *"[i]t made me think more clearly about what I want... I don't think I have ever gone through my life with such intensity before."*

Criteria 2c: Choosing an option

Asked, in the post-session questionnaire, whether the procedure had helped them choose an option, three participants thought the procedure had helped them 'very much', five 'quite a lot' and two 'somewhat', with no answers in the 'a little' and 'not at all' categories. This pattern of data was not statistically significant ($X^2 = 9$, $p < 0.1$ and $X^2 = 3.6$, $p < 0.1$ for the more stringent test), although the general trend of the data was in line with the highly significant findings for summed overall help. The two participants who answered 'somewhat' had not, at the time of the post-session questionnaire, chosen a particular path as they were still investigating their options; their qualitative comments indicated that they found the procedure had helped them in this process. For example one participant wrote, *"I have ...the foundations I can further build on...I have more or less chosen now. I just need a bit more time. I know have gone in the right direction."*

Criteria 2d: Dealing with the emotional side

Asked to what extent the procedure had helped with the emotional side three participants replied 'very much', five 'a lot', one 'some', one 'a little', and none 'not at all'. This pattern of data was not statistically significant ($X^2 = 8$, $p < 0.1$ and $X^2 = 3.6$, $p < 0.1$ for the more stringent test), although the general trend of the data was in line with the highly significant findings for summed overall help.

Comments from participants and a process-tracing of changes to participants' decision making[ii] provide evidence that mapping, exploring and assessing emotions helped participants with:

a) Becoming aware of and reassessing the impact of emotions

Considerable time was spent helping participants identify the range of emotions that they were experiencing around their decision, and the intentional objects of these emotions – what these emotions were about (their self-in-the-situation) as a way to make the information in these emotions explicit and enable the participants to assess the wisdom of these emotions. As the following quotations demonstrate some participants became aware of the significant impact that emotions were playing in their decision-problem:

- *"I did have a clear understanding of the situation already, I thought, but I didn't realise how much I was still clinging onto a job in the City".*
- *"It made me see how much irrational guilt plays a part in my life and made me determined to end this".*
- *"It was important to look deeply at what was driving me. Sometimes I couldn't see the wood for the trees and this made things clearer for me, I stopped being swayed by other people's opinions and wished for me, and this helped make things clearer, and stopped me being so confused and hence over emotional. I feel much calmer now when I think about my life. It has brought more emotional stability to my life."*
- *"Although the particular option of trying the course for a term was always there, I needed to realise how much the "pride" aspect of "giving up" affected me before realising what a sensible option this was".*

b) Using emotions to guide information search

Living in an uncertain world it is natural to feel anxiety when contemplating the future. In mapping participants' emotions about their decision a variety of anxieties were identified and these used to further direct information search.

- *"I have been able to examine doubts, possible problems and motivations, both unearthing anything I haven't thought through properly and reinforcing the positives behind my decision."*
- *"I think that going through what I believed made me look carefully at myself as I was having to explain myself thoroughly to another person. This created momentary self-doubt and turmoil, but I came back stronger because of it, as I then had to look at my doubts and see if my values could withstand them."*

c) Using emotions in identifying enlightened values

As emotions are theorised as involving often implicit value judgements, the procedure included asking participants to identify and assess the value judgments within their emotions as part of the process of building a list of enlightened values:

- A key moment was *"Using emotions to work out my values... Looking at people I admire/envy or feel sorry for to work out my values. I guess I knew my values already but never wrote them down or analysed them so deeply."*
- *"how I felt about my current position ... also ... gave me a hint as to what you have to watch out for or have to take into consideration in choosing your next/future job.*
- *"It was also helpful to air my feelings of guilt when we looked at niggles as by airing them they dissipated a bit and I can see how the sense of injustice from which they spring can be used as a motivator in my career change, rather than as a reason not to do it."*

d) Using emotions in choosing (and cross-checking the more deliberative process of choice)
After the participants had built a list of enlightened values, and developed a shortlist of likely options, participants were encouraged to choose by deliberating on how well each option met their enlightened values using the values/options grid, and select the option that best seemed to capture as much of their enlightened values as possible. As a cross-check on this process participants were also encouraged to reflect upon their emotions about this choice. What was unpredicted was the range of emotions that participants reported. These emotions included a sense of being pleased, relieved or surprised at finding a resolution to a decision they believed had no good resolution, a reduction in 'wavering', a sense of calmness, as well as increasing excitement at the prospect of implementing their choice.

3. Assessing the research

3.1 A tentative and *prima facie* case in favour

The use of this procedure to help participants make decisions has shown the workability of the concept – decision making need not be dichotomised as either intuitively following the heart or, more 'rationally' the head, as this research has shown that it is possible to integrate exploring and using emotions within an emotion-enabled, structured decision-making procedure. It proved possible to take the participants through a process that enabled them to reflect upon their emotions, using them as a fallible resource within a structured process, a process that participants seemed to find generally helpful.

The quantitative and qualitative analysis of the results provides a (no more than) tentative, *prima facie* case for a positive evaluation of the effectiveness of the procedure. It is no more than this because of various limitations to the research.

3.2 Limitations to the research

Limitation one: The number and type of participants and range of decisions

The evidence base is small as there were only ten participants, who were perhaps unrepresentative in their level of articulateness about themselves and their emotions; moreover they brought a narrow range of personal dilemmas, primarily connected to their work and career situation. In chapter two it was argued that the nature of a decision is common across contexts, a conclusion that followed from the conceptual analysis of a decision. While this remains true in the sense that all decisions, by the nature of being a decision, share the same components, different tasks might be more or less appropriate for different kinds of decision and different kinds of decision-maker; these questions cannot be adequately explored from this limited research base.

Limitation two: The reliance upon the author for collecting and analysing the data

Furthermore there are shortcomings in how the data were collected and analysed. The data was collected by the author who also carried out the process. Although the participants were encouraged to take the perspective of co-researchers in search of evidence to counter a tendency to give 'grateful', 'kind' or 'helpful' responses, participants might nevertheless have provided more positive answers to the author than if asked by a neutral third party. Moreover in interpreting the data there was no cross-checking of reliability between researchers and no blindness to the research questions.

Limitation three: The delivery of the intervention by the author

There are two problems connected with this. The first is that for the procedure to be scalable it must be possible that others can learn to deliver the intervention. How possible this is needs to be determined. The second is that any putative success of the procedure might be due to a 'founder effect' and not transferable to less enthusiastic others, however well-trained (cf. Twardy, 2004).

Limitation four: The lack of sufficient follow-up data

While the study provided some follow-up measure of the outcomes of the decision-making sessions in a few cases the follow-up at six months was too soon for the participants' decisions to have come to fruition making an assessment of whether the decision led to satisfaction and the realisation of enlightened values uncertain. Related to this the questionnaires did not turn out to be a workable tool for enabling participants to re-analyse the decision in terms of their reconsidered values.

Limitation five: The lack of a control group

While chapter six argued that the HSCED should be used in conjunction with a RCT methodology, for practical reasons this was not carried out. This meant that there was no control group against which to compare the results (but cf. Omer and Dar and the limitations they found to the use of the RCT in tracing causal pathways in the decision aiding research), nor evidence of how participants would have approached their decision making without the intervention, making it harder to be certain that any changes were the result of the intervention rather than simply being due to attention (c.f. Kinnier, 2000). This point is further explored below.

Limitation six: The developmental nature of the research

Furthermore although the procedure remained broadly the same, it was refined and developed throughout the research, and the author developed greater sophistication in its use, so later participants received some modifications that earlier participants did not.

3.3 On learning to use the procedure

Any extension of the research, and the practical use of the procedure in decision-coaching, should benefit from reflection upon the use of the procedure. As a piece of action research (Dick, 2002) what did the author learn from using the procedure for these cases?

Learning point one: Helping participants understand the process and the theory of emotions

Some participants in their feedback commented on their lack of certainty about where they were in the process. This was disappointing to the author as he wrongly believed that this would be clear to participants. Learning from this disappointment suggests that more time and care could be spent both on explaining the procedure to participants before starting, and pausing at various points to assess what stage had been reached and progress, or lack thereof, in coming to a decision. Related to explaining to participants the overall structure of the process more time could be used to explain the theory of emotions the procedure was based upon.

Learning point two: Emotions as a path to understanding values

As an example, while participants commented on the insight into their values they gained from the questions about who they admired and felt sorry-for, the author was surprised that in their feedback participants did not comment more on how the wider range of emotions explored about their self-in-situation and decision-problem fed into their understanding of their values. This surprise suggests that this aspect of the procedure needed more fully explaining to participants. The author was also surprised at just how useful the emotions of envy, admiration and feeling-sorry-for were. Participants on the whole (without it seems consciously doing this) drew comparisons that revealed what they wanted to change from, the values that they were coming to reject (the person they felt sorry for was seen in some way they saw as close to their situation and provided a cautionary tale) and the person they envied or admired as close to their hoped-for future, living the values they were moving towards.

Learning point three: Using emotions in cross-checking the choice and process

The author expected that decision-makers would be excited or not, and anxious or not, about their choice but the participants, especially in their questionnaires following the procedure, talked about a much wider range of emotion suggesting that many different emotions could be fruitfully explored to help decision-makers assess their choice. This research possibility is further explored below.

Learning point four: The need for problem solving the current situation

The author began this process without a sufficient grasp on the need to engage in problem-solving as part of decision making. In carrying out the procedure the author found that participants were sometimes experiencing unpleasant situations, which were motivating them to change their current situation without due consideration of the advantages to the status quo, a tendency which could result in jumping from the frying pan into the fire.

As a result of this the author came to realise that real-world decision making often needs to incorporate problem-solving the situation participants find themselves in. Taking one participant's experience as an example, difficulties in her work situation lead to the emotions of frustration, anger and resentment and a desire to leave the situation causing these emotions. The question is whether this is wise; decision-makers vividly and compelling experience the negative emotions of their current path (see Frijda's Law of Apparent Reality: 1988, 2007), but it is much harder to have vivid and compelling emotions for options that are 'remote' (at least of negative emotions of anger and frustration – the reverse might apply to hope). Experimental research also suggests that unfavourable outcomes to a good choice can lead people (especially those low in 'need for cognition') to prematurely switch to a different option (Ratner and Herbst, 2005).

Because of this lack of equivalence between tried (especially current) and imagined options part of wise decision making should include problem-solving the difficulties in the current path. Without this decision-makers are in danger of jumping from one option to another as soon as they encounter difficulties and negative emotions – a pattern the participant above

seems to have pursued previously, through switching organisations when she felt things go wrong.

In her case as well as anger, frustration and resentment this participant also experienced guilt and regret, and using these emotions, as well as more positive ones that she also felt about her organisation and role, led to her reviewing how she had acted and what changes she could make. In the end she decided to stay in her current post, develop new skills and establish good practices and rebuild her self-confidence, an option she had not previously entertained.

Generalising this suggests using emotions to problem-solve by directing reflection to specific aspects of the situation to change from – (those aspects that trigger frustration, anger and resentment) and to change to (guilt and regret suggested alternative strategies and areas for self-development).

A further use of emotions, spontaneously generated in the session with this participant, was employing counterfactual emotions to reconnect with alienated values, explored by asking what the participant would feel about her current situation if recent bad events had not occurred. Perhaps current situations that become tainted by the experience of a great deal of negative emotion can be 'cleansed' by tapping these counter-factual emotions. While there has been research on counter-factual emotions (especially regret) in option generation (Reese, 1999) this author has found none that investigates the possibility of reconnecting to a path and values through imagining how one would feel if difficulties had not arisen. Further research into how effective this is seems called for.

Learning point five: Including how to change/manage troubling emotions

The decision-making procedure was designed to use emotions as a fallible resource in wise decision making, not to 'therapy' persistent and troubling emotions. From experience of the cases the author has come to doubt the workability of this distinction, in the sense that participants don't just have decisions with emotions that can be used as a fallible resource, but are also troubled by their emotions, and want to reduce these emotions as much as to make a

wise choice. For example, one participant clearly experienced troubling emotions during her decision making and felt the procedure did not do much to help her cope with these emotions.

Related to this, difficult emotions can undermine a choice; as illustrated by another participant who failed to carry out her choice because of emotional difficulties encountered in its realisation, even though she still believed this was still a good, if failed, choice. The procedure took into account, in the final stage of realising the choice, the importance of adapting the situation to get desires on side, but these cases suggest that it might be prudent to combine decision making with some form of emotional therapy – perhaps CBT or meditation - to first reduce the strength of troubling emotions and hence enable participants to concentrate on the decision-making task and to better manage unwanted but persistent emotions that might derail an otherwise sensible course of action. When it is not possible to sidestep or reduce the strength of unwanted emotions then an alternative possibility, adapting a suggestion from Bazerman, Tenbrunsel, and Wade-Benzoni (1998)[iii], is to consider the final course of action to be a negotiation between the troubling emotions and the considered choice, to allow as many of the enlightened values to be realised as allowed by the unwanted, but disruptive, emotions.

4. Proposals for improving the evidence base

Clearly a replication and tightening up of the research is warranted; this section canvasses possible lines of investigation to improve the evidence base.

4.1 Triangulating the research

Research into the effectiveness of any intervention is complex and only tentative conclusions can be drawn from this preliminary study. Greater confidence can be placed in drawing appropriate inferences to the best explanation if research can triangulate between different methods that provide complementary perspectives (Macleod, 1994; Todd, Nerlich, McKeown, Clarke, 2004).

While there is some comparative data available (see the results section) it is possible that participants would have found other decision-making procedures equally or more helpful. The traditional research tool for the comparative assessment of effectiveness is the use of a random controlled trial (RCT), and this can be used to compare the effectiveness of the emotion-enabled decision-aiding model developed in this research with other models and waiting list controls. Of particular relevance would be comparing the model developed here with using the structured procedure but without the integration of the emotion-based interventions, or with an unstructured but emotion-rich process. A version of this would be to use an 'after-thrust' methodology[iv] by taking participants first through the structured procedure without integrating emotions, and then taking participants through the procedure again in its emotion-enabled form with the emotion interventions integrated to see whether new material is uncovered and important changes to participants' decision making occur. This process of comparison can also be improved by using common psychometric measures across treatments (and across different studies for meta-analysis).

The repeated use of the Hermeneutic Single-Case Efficacy Design could be replicated with more participants both to increase statistical power and to determine whether similar patterns of qualitative responses and tracing of changes through the process are found.

The procedure used some of the decision-making tasks identified in the literature review but not all, and further tasks are possible (e.g. Megginson and Clutterbuck, 2005). For example many different suggestions have been offered for how to enable decision-makers to identify their values. For the sake of both efficiency and maintaining the interest of decision-makers it is important to gain insight into whether some tasks are more enlightening than others. The RCT is unwieldy for investigating this due to the sheer number of variables involved and it is more realistic to investigate this through both asking participants to identify those tasks they found particularly helpful and to track changes to participants' understanding of their decision that could reasonably be attributed to the tasks. As mentioned above it might be that different emotion-enabled tasks would be appropriate for different kinds of decision-maker and different kinds of decision.

4.2 Improving feedback from participants

While the use of the questionnaire format provided some data on participants' assessment of the effectiveness of the procedure these questionnaires could be refined as some questions yielded better data than others. In particular the question about how the procedure helped with the 'emotional side' should be broken down to cover different aspects of the role of emotions in the procedure.

More generally the use of questionnaires as a research methodology is limited by the amount that participants are willing to write, and the problem of interpreting what participants mean by their answers. One problem, discovered in this study was distinguishing between suggestions that participants were making based directly on their experience or more 'theoretical' suggestions about what they think *should* be in a decision-making model. While both kinds of answers can be helpful the first is more so for testing effectiveness.

The general problem of vagueness and ambiguity to answers can be ameliorated with using interviews to probe participants' views more deeply both post-session and at follow-up. In addition the questionnaire methodology might have enabled the participants to engage in some motivationally biased analysis (Festinger, 1964; Kunda, 1990) of how their decision was working out in a way that an interview might have been able to uncover. The interview methodology is itself limited by participants' recollection of the sessions, a difficulty that can be ameliorated by recording sessions and reviewing these recording with participants so that they can identify with precision those interventions that they believed helped or hindered them in their decision making.

The analysis of the cases captured by the case diagrams could also be cross-checked by asking participants whether they agreed with the interpretation and whether there were important factors they believed were missing. Other perspectives can also be sought through third-party observations and interpretations.

4.3 Isolating independent variables for greater control

In the research no distinctions were made between participants and types of decisions, and it is possible that the success of this or related procedures is dependent upon the following independent variables that can be isolated for further investigation:

Participant's decision-making style
Whether decision-makers tend to use rational, intuitive, and dependent styles (Harren, 1979; see also Driver, Brousseau and Hunsaker, 1998) might impact how decision-maker's interact with, and the success of, the procedure. A complicating factor is that different aspects of the process might favour different styles (Huitt, 1992).

Participants' levels of 'emotional intelligence' and intellectual functioning
The procedure depends upon decision-makers being able to identify and 'decode' their emotions and decision-makers are likely to have variable levels of emotional intelligence (Salovey and Mayer, 1990). Similarly it is likely that different levels of intelligence, or more generally the extent to which participants are subject to differing forms of 'dysrationalia' (Stanovich, 2009b) might impact decision-maker's ability to use the procedure effectively. Comfortableness and willingness to engage with different decision-making tasks might be connected to levels of emotional and intellectual intelligences. While it might be the case that some of the formal aspects of decision analysis (such a decision trees and sensitivity analyses) might be off-putting to those who lack a mathematical 'bent', emotion-enabled tasks might be similarly off-putting to decision-makers who find the exploration of their emotions uncomfortable.

The type of decision in terms of content
The literature often tends to divide decision-making research into different categories, such as policy making, organisational decision making, ethical decision making, professional decision making, career-decision-making and personal decision making. This is plausibly a 'social construction' in the sense that these divisions are artificial creations of how Universities have evolved into departmental structures rather than, to use Plato's phrase, carving nature at its joints. Indeed theorists who have been exposed to particular literatures tend to approach

decision making in similar ways across 'domains' - for example see Gati's application of concepts from the decision literature to career decision making (Gati, 1986, Gati, and Asher, 2001).

Nevertheless there might be some interesting differences depending upon whether decisions are centred around, for example, personal, organisational or professional issues as these decisions might trigger different kinds of emotional experience depending upon the relevant goals and values. Within organisational contexts particular values (and objectives that contribute to these values) are likely to be foregrounded because of the functions of these organisations within society – for example the fire department is concerned with meeting the values of the protection of life and property through the objectives of fire prevention and fighting (Simon, 1997). This suggests that decision-makers within organisations have roles that include the pursuit of organisationally specific values and objectives. Nevertheless these objectives and values do not determine decisions as (i) they need specifying for particular decisions (ii) other values or ideals will also be implicated in decisions and (iii) decision-makers might bridle at their roles and not 'buy into' organisationally prescribed values and objectives. All these factors suggest the triggering of emotions.

The degree of felt difficulty, or 'stuckness' of the decision
As these decisions were all decisions participants self-identified as difficult – dilemmas is not too strong a word - it is perhaps to be expected that they might involve emotional difficulties making an emotion-enabled procedure more appropriate. An issue to investigate is whether the procedure would also be experienced as helpful by participants who did not perceive that they were having difficulties making a decision. Saka, Gati and Kelly (2008) provide a taxonomy of emotional and personality related aspect of indecision. It is possible examine how effectively this procedure (compared to others) helps decision-makers to master these aspects of indecision.

5. Further research possibilities

5.1 Interpersonal decision making

Many decision processes involve communication between more than one party. Future research could investigate how well the emotion-enabled process translates into promoting effective interpersonal decision making (cf. Fisher and Shapiro, 2007). This is particularly relevant to decisions made in organisations where many people are involved in decisions – although Nutt notes that in a study of 343 decisions in organisations only 14% delegated the decision to a group (Nutt, 2005).

There is a potential further benefit of the procedure applied to interpersonal decision making, as exploring emotions is not just illuminating to the individual themselves but can also help others understand where that individual is 'coming from'. However, some reservations about the applicability of the process to groups are:

i) *Complexity*: different individuals are likely to have many and different emotions and exploring these increases the complexity of the process.

ii) *Privacy*: emotions are often felt to be personal so individuals might be reluctant to reveal these in an interpersonal situation (cf. the research by Argyris (e.g. 2000) about those who rely on 'Model 1' processes through fear and embarrassment[v]).

iii) *Conflict*: some emotions are likely to be assessments of the actions and character of other group members, and if these emotions are expressed – for example anger at others perceived incompetence – the resulting conflict might derail, rather than enable, effective decision making.

5.2 'Folk theories' about the use of emotions in decision making

One participant who came to two sessions quite widely separated in time stated that an advantage of this time interval was that she discovered her emotions were consistent over time and that because of this she trusted her emotions more (she was not being a 'flibbertygibbet'). Generalising from this suggests three important points. First, that participants' 'folk theories' about emotions are likely to influence how they use emotions - in this case whether emotions are 'believed' and hence 'listened to' - within the decision-making procedure. Second, that there might be an important role for including a theoretical explanation of the role of emotions in the procedure with participants before using the procedure. Third, that research can explore 'folk theories' about how to use emotions in decision making for further hypotheses about how to make wise use of emotions.

This author has found no research investigating what individuals believe about how to use emotions wisely in decision making. Three research questions that arise from this participant's folk theory are:

i) What is the relationship between consistency of emotions over time and wise decision making?

ii) Do people 'naturally' use consistency in emotions over time as a way to judge what matters to them (their values) and make decisions?

iii) Can people reflectively use consistency in emotions over time in this way?

5.3 Researching tasks within the procedure

This research has focused on investigating the procedure as a whole. This approach was taken because emotions impact on the whole range of aspects of making a decision, and this impact is complex and intertwined. Nevertheless it would be possible to shine the research spotlight on specific components. For example this procedure used the participants' emotions about their self-in-situation as a source of information in the generation of the list of their enlightened values. It would be possible to compare the lists of values generated by participants with this emotion-enabled task with non-emotion based tasks for helping participants identify their values. These lists could be compared by the comprehensiveness of the lists, whether the participants 'embraced' the values as values they wished to live by, and the extent that their decision making actually used these values.

5.4 Can participants learn to use the procedure?

An important question is to what extent this kind of emotion-enabled decision-making process can be used by an individual on their own, without decision coaching. There are three reasons why this might prove problematic:

i) As emotions can be obscure and distorting it can be difficult for decision-makers to understand their emotions by themselves.

ii) It is difficult to be motivated to take the time and energy to think through decisions in a structured way without being 'prodded' by others.

iii) It is difficult, due to limited attentional resources, to manage a decision-making process while also thinking about the content of a decision. As Perkins noted, "A freshly acquired frame of any complexity will occupy considerable space in working memory…When putting the frame to work the learner must laboriously remember what the frame says to do and do it piecemeal with great attention. At the same time, the learner must also hold the problem to which the frame is being applied" (1987, p 49). This is a general problem for the use of new

'mindware' (Perkins, 1995), and is a difficulty that is exacerbated by the amount of attentional resources that emotions occupy (Conway and Giannopoulos, 1993).

Research can also be carried out to investigate whether using the procedure impacts future decision making. Do participants as a result of using the procedure in their session go on to use it for future decisions, and with what reliability?

Related to this, it seems likely that the use of a structured decision-making procedure can become 'second-nature'. Hogarth, in Educating Intuition suggests, "if people develop mental habits that are based on the principles of scientific method, then the quality of their intuitive thoughts and inferences should improve" (2001, p 226). The same might occur for decision making so that decision-makers more or less automatically distinguish thoughts into different categories (this is about values, this about options etc). Perhaps emotion-enabled tasks might also become relatively automatic, when for example decision-makers evaluate their emotions for whether they are providing reliable information about enlightened values, or are triggered by situations that the decision maker has learned are deceptive and summarily ignored.

5.5 Implications of the on-going nature of decision making

As many writers have noted (e.g. Mintzberg, Raisinghani, and Theoret, 1976; Klein, 1998) a decision is not made at one moment in time and done with. This is because (i) the situations within which decision-problems are located change (situations are 'on-going' in the terminology used in defining a decision in chapter two) and (ii) decision-makers can revise what they consider to be their enlightened values. This implies that even the most successful decisions require re-evaluating from time to time.

An empirical question is to what extent engaging in the kind of decision-process carried out here helps or harms on-going decision making. It can be theorised to harm if the process tends to produce rigidity, perhaps through leading to insensitivity to changes in the situation (Weick and Sutcliffe, 2001), over-attachment to the decision and its assessment of the situation and values, reluctance to reconsider a decision that took so much time and effort to make, or by

creating doubts that the decision could be remade effectively without the aid of a complex decision-procedure or a decision coach. Indeed one participant who did modify her choice after the decision-making sessions, when her situation changed offering new possibilities wrote, *"I kind of clung onto the idea that I couldn't go back on my decision and felt bad when I had to break it"*. She concluded with the useful observation that, *"[p]erhaps some guidance on this kind of thing happening would have been helpful"*.

On the other hand the process could be theorised to decrease rigidity perhaps by providing decision-makers with an analysis of their chosen path and its values-at-stake that can provide a template against which to monitor the need for changes, an attachment to the process of decision making rather than the decision made, and increased confidence through competence in the process of decision making. Furthermore the process might encourage decision-makers to adopt the theoretical view that they should 'listen out' for messages from emotions about difficulties in the realisation of the decision, prompting reconsideration.

Further research is needed to investigate these issues as well as the question of how to integrate an extended decision-process, such as the one used in this research, into the need for iterative decision making. Possibilities include:

- Repeated use of an extended procedure.
- An extended procedure at what is perceived to be a crucial turning point, with follow-ups checking on whether there have been any crucial changes that suggest the need for another extended procedure.
- A series of smaller-scale procedures spread out over a longer time-frame.
- A means to identify those aspects of a decision where decision making is most tricky and concentrating attention on those elements rather than an extended coverage of all aspect. This is related to what Russo and Schoemaker (2002) call the metadecision - deciding how to decide.

5.6 Emotions in cross-checking the choice

Carver and Scheier (1998) theorised affect as a self-regulatory feedback process that monitors ongoing actions and compares them to salient reference values to determine how well a decision-maker is progressing towards their values. Joy or elation is experienced as a result of progress towards their values and depression or anxiety as moving away. One participant mentioned that as well as excitement she felt a sense of calmness when she contemplated the new shape of her life, an emotion that gave her confidence that she was moving in the right direction. Perhaps calmness, as much as excitement or elation and joy, is an important guiding emotion for decision making, enabling decision-makers to judge whether options will satisfy their values.

If emotions are understood as relevance detectors (Ekman, 2003) which function to bring concerns about values and goals not being met to attention, then calmness can be theorised as a meta-emotion experienced when decision-makers are no longer experiencing these emotional prompts. If this is the case – and assuming that emotions are well-tuned to enlightened values - then perhaps calmness provides a reasonable guide for concluding a choice is well-founded as emotions are no longer seeking to interrupt the choice.

Further research is needed to examine:

- Whether other decision-maker's experience this emotion of calmness in their decision making.
- Whether this emotion, as Carver and Scheier theorise for elation and joy, is related to the velocity of changes in circumstances (does calmness wear off once you have new direction that seems likely to satisfy values or is it a continual guiding emotion?).
- Whether calmness is a good guide to making a choice.

Janis and Mann (1977) refer to complacency, a state of insufficient anxiety, as a poor guide as it prompts decision-makers to unwise unconflicted adherence or change. An important issue is whether it is possible to distinguish calmness from complacency. One possibility is that appropriate calmness requires a period of emotional turbulence before it; the turbulence occurs

when potentially unfulfilled values and goals are pushed into the forefront of decision making when different options seem to threaten these goals, leading to turbulence as decision-makers bounce between hope and despair. As the decision-maker manages to find a way forward that broadly satisfies all their major values or goals, or they come to recognise and accept that compromise is required, a period of calmness ensues. In line with the general perspective offered in this research decision-makers need to remain wary that the calmness might be based upon a misreading of the situation they are facing or some form of protective distortion or transformation.

Calmness here can be seen as a feedback emotion providing a clue as to whether the decision-maker is moving in the right direction. Lacewing suggests that emotional insights can be used more generally to assess the process of deliberation:

> The deliberation may seem to have become stale, or waspish, or missing the point, or unduly technical, or defensive; or it may feel true, important, expressive, involving, and so on. These emotional responses to the process of deliberation are a part of that process, a feedback mechanism that can help guide the course it takes. (Lacewing, 2005)

It is worth pointing out how different the perspective offered here is to the model of Dijksterhuis and Nordren (2006), who advocate trusting intuition to make a complex choice, rather than using emotion as an insightful but fallible resource, with its place to play within a set of checks and balances between reason and emotion.

5.7 Reducing self-deception

Two participants stated that the methodological nature of the procedure and inclusion of emotions reduced their tendency to self-deceive *("Perhaps being candid with myself. Not that I used to try to mislead myself deliberately before, but at least after having carefully and methodically analysed myself (in respect of my situation, values, emotions or options), I think it becomes automatically more difficult to fool myself"*), although one of these also noted that some self-deception was still possible.

This raises some intriguing possibilities. Can the possibility of self-deception be reduced? What was it about the methodological nature of the process and the inclusion of emotions that these participants believed reduced their tendency to self-deceive? What would the other participants have said if they had been asked if the procedure reduced their tendency to self-deceive? Are there particular tasks that could be used to reduce self-deception at different stages?

Perhaps the following questions might be added to the procedure to help participants to challenge their self-deception:

- Standing back and being completely honest with yourself, what might you be deceiving yourself about?
- Do you have any tugs of anxiety or guilt about the reliability or truth of any claims you are making?
- What might a good, but critically fair-minded, friend suggest you might be deceiving yourself about?

This is an area of great importance to wise decision making, but also challenging to research.

6. Psychological (emotional) states at different points in decision making

A related literature to the decision-making literature is the change literature; how might these two literatures inter-relate? Janis and Mann (1977) refer to the psychological states of 'accepting' a decision challenge, 'committing' to a choice and 'adhering' despite difficulties. 'Feeling stuck', 'embracing a choice', and 'letting go' of a failing choice seem to belong in the same category of psychological states people experience during decision making. While these states seem related to the 'stages of change' (Prochaska, Norcross and Diclemente, 1994) in that a series of transitions of some sort seems involved, this author has found little research on these states specifically for decision making.

This raises the question about the ontological status of these psychological states, whether there are other such states, how they can be known, what they might consistent in, whether they are inescapable aspects of serious decision making, and if so how to appropriately move through them. Below are some exploratory reflections upon these states.

Accepting the challenge
For serious decisions, where important values are at stake and it is not clear how to proceed, or where it seems that tradeoffs of important values are required, accepting the challenge is accepting the existence of these difficulties and the need to think deeply about the decision – thus entering a reflective state. Entering this reflective state requires willingness live with doubt and uncertainty, accepting that this doubt is a call to reflection and not to avoidance or impulsivity. Accepting the challenge perhaps differs from feeling stuck as it includes the hope that some progress in finding a way through a decision-problem to a workable solution is possible.

Embracing the choice
A decision is difficult to embrace if there are conflicting values at stake. Given that decisions in the real world frequently involve tradeoffs between different – perhaps 'incommensurable'- values there is a constant potential source of prospective and retrospective regret for values foregone. These prospective regrets can cause decision-maker's emotional difficulty and

require reconciling to the losses inherent in any multi-value decision. Embracing the choice requires recognising the tradeoffs involved in the choice, that not all the important values can be realised, but that this compromise is one that you as a decision-maker want, overall and despite the drawbacks, to make. This embracing of a choice might involve realising that while guilt over lost values is not appropriate, as the decision is as good as it reasonably can be, regret for foregone values is (this emotion of regret can also provide guidance that it might also be appropriate for actors to apologise to others or indeed themselves about these foregone values).

Committing to the choice

After embracing the choice it is still likely that prospective regret for foregone values and anxieties about acting on the choice are likely to be felt, and these emotions might impede action. Perhaps committing to the choice is gaining sufficient impetus to carry out the choice, and this might involve getting more emotions with their desires 'on your side'. Gaining this commitment might be possible by altering the 'choice architecture' (Thaler and Sunstein, 2008) by, for example:

- telling others about the choice to trigger prospective embarrassment if it is not carried out.
- taking small steps that trigger less anxiety, and produce some satisfaction, or 'small wins' (Weick, 1984).
- putting oneself in the company of people who bolster the choice to reduce doubt.

Whether these, or other 'tricks', work or not perhaps depends upon the values of the decision maker. For example if the decision maker does not care about admitting to others a change of mind (or a failure) telling other of one's intentions is unlikely to have much impact.

Adhering to the choice

Janis and Mann (1977) noted that difficulties are likely to arise after a decision had been initially implemented and decision-makers would need to adhere to their choice in spite of these difficulties. They advocated 'emotional inoculation' to prepare the decision-maker as through the 'work of worry' coping strategies would be devised. It is also possible that preparing for difficulties means that the emotions triggered by these difficulties are less intense, as they are not magnified by surprise (Elster, 1999a) and hence easier to surmount.

Decision-makers are well advised to be generally prepared for changing levels of emotional intensity as foregone values are likely to trigger emotions through memory processes or an encounter with relevant situations. Sartre's gambler (1943/2003) who expected his decision to quit to stand as a solid barrier behind him perhaps gave himself a harder task than he needed if he had properly noted that his excitement at gambling would be triggered by approaching the tables and this would temporarily change his value hierarchy. He would have been better off avoiding situations triggering these emotions and perhaps carrying an *aide-memoire* of the reasons for making the choice, reaffirming the value tradeoffs made, and imagining the regret and shame he might feel if he were to falter. It is also important to remember if the situation a decision maker is embedded within has not changed in any significant way, then the choice does not need remaking[vi]. It is also possible to adhere through finding encouragement from others who managed to keep going – this is likely to be particularly effective when others are perceived as similar to oneself[vii] (Bandura, 1977).

Letting go of a failing choice

When carrying out choices it is possible to miss the 'mean' in two opposite ways (Aristotle, 350 B.C.E./1980) - by failing to adhere to a good choice and by failing to let go of a bad choice. In the case of letting go perhaps decision-makers need to reverse the states – they need to 'unembrace' the choice by recognising that the important values-at-stake are not being sufficiently realised, and take 'un-committing' steps, by for example informing others they are starting to have some doubts.

It seems possible that these states are ones that take some time to 'mature' for serious decisions - one does not instantly accept, adhere to, let go off, embrace or commit. This is consistent with James' phenomenological account of 'toing and froing' (1890, chapter XXVI). If these states are vital to serious decision making, and involve a period of adjustment, this might also suggest that decision making can profitably be spread over time.

7. Conclusion

In general there is a paucity of research into how to improve decision making (Bazerman, 1997; Milkman, Chugh and Bazerman 2008). The review of the various structured decision-making models revealed a rich seam of suggested tasks for improving decision making. While these tasks have been presented with, often persuasive, illustrative accounts of how they can improve aspects of decision making, with few exceptions very little rigorous empirical research has investigated the effectiveness of these tasks. Data is even thinner when looking at decision-making processes as a whole. Nutt (1999, 2005, 2007, 2008) and Herek, Janis and Huth (1987) provide evidence that the Discovery Process and Vigilant Decision Making are broadly successful approaches. However these studies do not manipulate the decision processes used, so do not provide data on how successfully any of the specific tasks advocated might be integrated into a decision-making process. Omer and Dar note that "[a]lthough Janis and Mann have published a series of studies on the different elements that constitute their approach …the effectiveness…as a whole has never been tested" (2007, p 600). Omer and Dar's own pioneering study illustrates the promise and problems in this research; although it did combine different tasks based on Janis' account, and compared this with another protocol (both of which showed promise as measured by reduction in indecision and satisfaction), only a selection of tasks were used, and determining the causal impact of these was difficult when using global outcome measures without tracing process impacts.

No doubt this lack of research has been in part because of the methodological difficulties, and the research presented here could be criticised as a fool rushing in where angels fear to tread. However these difficulties are sometimes no worse (and no better) than the difficulties of carrying out counselling research, and many of the research tools developed to carry out counselling research are also applicable to research into decision making (see also Fischhoff, 1980). Wise decision making is as important to human well-being as improved mental heath (and a means to improved mental health) and deserves the same concentrated attention through building up a body of research using varied research approaches both inside and outside the laboratory. It is hoped that this research is a small step in this direction.

Notes:

[i] Participants provided answers on a Likert-type scale. The less stringent test compared the distribution of answers across all five categories, the more stringent test grouped the data into two categories, with the two highest and three lowest answers forming the categories.

[ii] See previous chapter

[iii] Bazerman *et al*. (1998) distinguish between a 'want' and 'should' self, where the 'should' self takes the longer term view (going to the gym) and the 'want' self the short-term (eating more crisps). The desires of the want self often overrule the wiser should self's plans. As well as needing to negotiate between these selves Bazerman also argues the want self "may realize the value of certain emotional criteria that are underweighted because the should self cannot explicate them clearly. It may also be that the should self is too conservative, risk averse, or even boring to maximize an individual's self-interest. We argue that the want self may be useful in the decision-making process, yet it may be useful to improve the want self by influencing what we want to be more rational, cognitive, thoughtful, and cool headed" (p 235). The emotion-enabled procedure is designed to make just this use of emotions, while resisting the overly singled minded, short-sightedness of the want self.

[iv] Suggested by Stephen Smith.

[v] Emotions are under theorised in the work of Argyris and Schon so it is not clear why fear and embarrassment are meant to have these effects – is it a reluctance to explore unpleasant emotions because they feel unpleasant? Or anxiety about what the messages in their intentional content might imply? Or are their emotional distortions at work? Or are fear and embarrassment wise friends leading us away from dangerous areas?

[vi] I thank Antonia Macaro for her description of a case study of a client for whom this was a revelation that he felt compelled to share with others he believed would also benefit in adhering to their choices.

[vii] This author managed to adhere to his choice to complete writing his PhD through encouragement derived from reading of another person who managed to complete facing similar high commitment work circumstances (Megginson and Clutterbuck, 2005).

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APPENDICES

Appendix 1: Summary Of Decision Making Tasks From Chapter Three

Stage 1	Decision-Problem
Goal	**Understanding the situation and clarification of the decision-problem**
Kepner-Tregoe Rational Manager	Identifying and clarifying concerns by considering: a) Specific programmed tasks, duties etc. and concerns about carrying them out b) Search for other concerns by: -List current deviations, threats and opportunities (e.g. where standards are not being met) -Review progress against goals -Look ahead for surprises (e.g. what major projects/plans are about to be implemented) -Search for improvement Find out more about concerns by asking: -Do we think one action will resolve this concern? -Are we talking about one or several things? -Are we in agreement as to the reason we are concerned about this? -What do we mean by…? -What do we see that tells us we must take action? -What is really troubling us about this situation? Determine priorities by considering: -How *serious* is the current impact of the concern on productivity, people, and/or resources? -How much *time urgency* does it have? -What is the best estimate of the *probable growth* of the difficulty? Distinguish the type of Rational Process to use by determining: -Is there a deviation between expected and actual performance, is it the result of an unknown cause, and must the cause be determined to take action -> Problem Analysis -Does a choice have to be made among alternatives, or whether one alternative should be implemented? Do objectives need to be set? -> Decision Analysis -Is there an action to be taken? Is there a plan to implement? Is there a need to monitor an existing plan? -> Potential Problem and Opportunity Analysis Determine the level and produce a clear statement of the decision to be made.
Janis Vigilant Decision Making	Appraise the challenge: - How credible is the information? - How important is the threat? - How urgent is the threat? Counteracting Rationalizations Emotional Role Playing Accepting the challenge
Nutt Discovery Process	Identify claims made about problems and opportunities and question claims Unpack the claim's assessments of 'arena of action' and significance

Start information gathering

Consider social and political forces (e.g. 'who can block action')

On basis of initial information decide whether to investigate the claim further

Adopt a decision-making rather than a fixing problem approach

Accept doubt

Hammond-Keeney-Raiffa PrOACT	Be creative about the problem definition as how the problem is defined is crucial to what is chosen
	Maintain your perspective by remembering crafting a good problem definition takes time and careful thought and balancing against: - Time (do you have enough?) - Importance of the decision problem - Emotional energy (can you face it now?)
	Define the decision problem by: - Investigate how the 'trigger' has framed the decision - Question assumed constraints and assumptions - Identify the essential elements - Understand what other decisions hinge or impinge on the decision. - Establish a sufficient but workable scope for the problem definition - Gain fresh insight by asking others how they see the situation
	Re-examine the problem definition while working on the decision as perceptions and situations change
Additional tasks	Consider the Metadecision (Russo and Schoemaker, 2002)
	Get unstuck (Omar and Dar)
	Make Scenarios of the future (van der Heijden, 1996)

Stage 2	**Values/objectives at stake**
Goal	**A set of enlightened values and objectives**

Kepner-Tregoe Rational Manager	Identify and list objectives by answering: -What specific goals should be met? -What needs must be satisfied? -What are the limitations? -What are short and long term objectives?
	Order objectives in importance by determining: -Which are MUSTs and which WANTs -What is the relative weight of the WANTs
Janis Vigilant Decision Making	Search for goals/values by using: - why questions - value clarification exercises - a 'Balance Sheet' to assess options in terms of: a) Utilitarian gains or losses to self (e.g. income, security, interest) b) Utilitarian gains or losses for significant others (e.g. income, status, time available)

	c) Self-approval or disapproval (e.g. self-esteem from contributing, ethical justification, originality) d) Approval or disapproval from significant others (e.g. praise, admiration) Use Outcome Psychodrama
Nutt **Discovery Process**	Identify the needs (objectives) embedded in the claim, and distinguish whether something needs fixing, or an objective reaching Build a list of broader and narrower objectives for flexibility in the scope Uncover objectives implicit in proposed solutions (the whys in the hows) and claims Use the laddering technique Avoid being 'pushed' by pressures to act
Hammond- **Keeney-Raiffa** **PrOACT**	Identify objectives by: A Wish List; Determining the Bottom Line; Examining Tradeoffs; Examining Alternatives; Consulting Codes, Guidelines and Regulations; Taking Different Perspectives; Consulting Strategic Objectives… Structure objectives by: - Succinctly putting into Verb-Object form - Creating a Hierarchy of Objectives - Creating a Means-End Network
Additional tasks	Conceptual analysis (Wilson, 1963) Explore values of states of world, states of mind and character (LeBon and Arnaud, 2004)

Stage 3	**Options and their Consequences**
Goal	**A set of credible options with understanding of their possible consequences**

Kepner-Tregoe **Rational Manager**	Find alternatives: Alternatives can be given (for example by more senior management) or generated. Alternatives are generated by using any method that releases creativity. Evaluate alternatives by asking: -Is information as specific, complete and up-to-date as possible? -Does each alternative meet the MUST objectives? -How well does it meet the WANT objectives? Imagine the alternatives have been selected and determine how they might go wrong by asking: -What are the implications of being close to a MUST limit? -Where might information be invalid? -What problems could we have if we implemented this alternative? Judge the seriousness of the risks by asking: -How serious would each adverse consequence be if it did occur? -How likely is each adverse consequence? -What actions can we plan to prevent or minimize the effect of each adverse consequence?
Janis **Vigilant Decision** **Making**	- Brainstorm by: avoid evaluation at the beginning; generate as many alternatives as possible; try to be original (try a few 'far out' possibilities); modify flawed alternatives; ask other people; engage in free-floating contemplation; avoid dichotomies

	Thoroughly canvas a wide range of alternatives
	Use how questions
	Build scenarios of the likely futures of options
	Intensively search for new information to further evaluate alternatives
	Conscientiously take account of new information or expert judgement exposed to, even when this does not support the course of action initially preferred
Nutt **Discovery Process**	Search for ideas, ideally using integrated benchmarking, repeated solicitation and innovation
	Use creative thinking practices
	Use safe spaces
	Avoid constricting creative thinking beliefs
Hammond- **Keeney-Raiffa** **PrOACT**	Creatively think up options by: - Asking how objectives can be realised. - Challenging assumed constraints. - Setting high aspirations to force thinking in new ways. - Thinking before consulting others (in order not to be framed by others perceptions). - Learning from what others have done. - Asking others for suggestions. - Giving the subconscious time to operate. - Creating alternatives first, evaluating later. Consider alternatives focused on: - Process (turning the decision over to voting etc) - Win-win (with others involved in the decision) - Information-gathering (alternatives that enable) - Time-buying (alternatives that enable) Never stopping looking for alternatives
	Describe consequences with appropriate accuracy, completeness and precision
	Mentally put yourself into the future (what will it be like)
	Create a 'free-form' description of the consequences of each alternative
	Eliminate any clearly inferior alternatives
Additional tasks	Use varied Perspectives (Linstone, 1984; Mitroff, 1998)
	Use the Concept Fan (De Bono, 1993)
	Use the Premortem (Klein, 2003)
Stage 4	**Choice**
Goal	**Selection of the option that promises to realise values/objective best**

Kepner-Tregoe Rational Manager	Weigh the risks against the benefits and ask: -Are we willing to accept the risks to gain the benefits? -Can we live with the degree of risk inherent in this alternative?
Janis Vigilant Decision Making	Re-examine positive and negative consequences of all known alternatives, including those originally regarded as unacceptable, before making a final choice
	Make the decision based on 'informed intuition'; an intuitive (non-calculated) judgment of where the greatest weight lies, informed by the listing of pros and cons of options and ordering goals/values in terms of importance
	Take account of the full range of objectives to be fulfilled and the values implicated by the choice
	Weigh drawbacks, and uncertain risk of negative consequences, as well as positive consequences
	Search for new information to evaluate
	Check that the final decision and the process to reach it feels right
	Vague feelings of repugnance and apprehensiveness and being attached suggest further reflection
	Antipathy and liking are tie-breakers between options
Nutt Discovery Process	Dialectical Inquiry and Devil's Advocacy
	Avoid intuition and defensive reasoning
	Don't ignore ethical issues –approach through prodding participants, ethical tests (e.g. Billboard) and stakeholder dialogue
Hammond-Keeney-Raiffa PrOACT	Build a consequences (values and alternatives) table to compare alternatives
	Eliminate 'dominated' and 'practically dominated' alternatives
	Make tradeoffs between objectives with 'even swops' (to identify the alternative that best meets the objectives)
	Build a risk profile by: - Identifying key uncertainties - Specifying the different outcomes from these uncertainties - Assigning probabilities to the outcomes - Clarifying the consequences of the different outcomes
	Picture risk profiles with decision trees
	Understand your willingness to take risks by: - Determining the relative desirability of the consequences of the alternatives by clarifying their impact - Weighing desirabilities by probabilities of outcomes - Comparing alternatives and choosing
	If choosing is still difficult quantify risk tolerance with desirability scoring and create desirability curves

Additional tasks	Adhering to or letting go of previous choices
	Moulding options to better capture values and objectives
	Checking embracement of the choice (Whitmore, 2009)
	Noting if in zone of indifference between choices (Klein, 2003)

Stage 5	**Action**
Goal	**Effectively carrying out the choice**
Kepner-Tregoe Rational Manager	Produce concise statement of the action to be taken. 1. Specify the actions needed to be taken to reach the intended goal by: - listing chronologically, and/or - using planning techniques such as breakdown structures, network diagrams, Gantt charts etc 2. Ask where the plan is most vulnerable (use experience, judgment and common sense) by: - asking generic questions ("what problems could this action cause?) - focusing on likely stress points (e.g. shared responsibilities and overlapping authority, little experience, complex interface of people and machines, tight deadlines…) - Specify the what, where, when and extent of potential problems, being specific 3. Look for potential opportunities by: - asking what opportunities might be found and unintended benefits could be created 4. Assess probability and seriousness of potential problems, and when to check for their occurrence Identify likely causes by asking: - what specifically would cause the potential problem or opportunity? - what other causes could bring this about? Taking preventative or promoting action - what can be done to prevent the cause from occurring, or reduce its likelihood, or stop it creating the potential problem - what can be done to enable the cause to occur, or increase its likelihood, and ensure it will create the potential opportunity Planning contingent or capitalizing actions and setting triggers For likely causes ask: - what actions can be taken to minimize the damage (problems) or maximise the benefits (opportunities) if they occur? - how can it be known the problem or opportunity has occurred?
Janis Vigilant Decision Making	Take minor steps to commitment (tell people, make preparations, act) to help overcome the psychological barrier to acting on difficult choices Make detailed provisions for implementing and executing with contingency plans Stress Inoculation to prepare for setbacks
Nutt Discovery Process	Manage social and political barriers that can block the preferred course of action during implementation
Hammond-Keeney-Raiffa	

PrOACT

Additional tasks

Stage 6	Monitoring and Adapting
Goal	**Testing whether the choice has realised values and modifying as appropriate**
Kepner-Tregoe Rational Manager	See above
Janis Vigilant Decision Making	Use scenarios to make explicit contingency plans for what to do if things don't work out.
	Ask is the decision still best, all things considered - Adhere to despite negative feedback
Nutt Discovery Process	Manage social and political barriers that can block the preferred course of action during implementation
Hammond-Keeney-Raiffa PrOACT	
Additional tasks	Let go if the choice is failing.
	Use Scenarios to prepare for the future (van der Heijden, 2004)

Appendix 2: The Decision Making Procedure

About the PROGRESS procedure

Progress helps you become clearer about your choices by taking you through the five stages of wise decision-making.

The first stage is to *understand the situation and decision* – for how could you make a wise decision if you didn't understand your situation? This stage involves both disentangling feelings from facts and facts from fiction.

The second stage of wise-decision making is to *clarify your objectives* - what really matters about this decision?

The third and fourth stages flow naturally: brainstorming *possible options*, looking for choices that satisfy as much as possible of what matters and then *assessing which of these options satisfies your objectives best*.

The fifth and final stage will help you think about *implementation*, about how best to put your wise decision into practice.

Before engaging in this process consider: Is now a good time to take this decision – can I know enough, do I have the emotional and time resources needed, when does the decision need to be made by?

STAGE 1) UNDERSTANDING THE SITUATION AND THE DECISION
a) Initial overview

i) What decision do you want to work on?

ii) Name some options that you've already thought of

1	
2	

iii) Describe your situation
Jot down your situation, as if you were describing it very briefly for someone who didn't know you at all.

My situation is…	
1	
2	

b) Working on your emotions

i) What do you feel about the situation?
What is your emotion *about* and how strongly do you feel?
e.g. I feel <very, moderately, a little> <anxious, excited, apprehensive, calm, etc> about <starting something new, meeting new people, doing something I've always wanted to do, not having enough money> (In the chevrons <> above are examples of the strength, emotion and what it's about. The examples are not meant to be comprehensive – fill in what you feel, but make sure you include the strength, the emotion and what it is about).

Emotion	About	Strength	Appropriate?

ii) Is your emotion appropriate?
Reflect for a moment on whether each emotion and its strength is appropriate?. What evidence have you got, or might you be fortune-telling or mind-reading? Even if you think that you should be (e.g.) anxious, might the strength of the anxiety be disproportionate?

c) Taking stock of the situation

i) Check your description of the situation
Do you now want to add or subtract anything to or from your 'headline' account of the situation above?

ii) What is the decision you would most like to work on now?
Do you want to modify or change your account of what decision you want to make?

iii) Do you need further information?
Are there any things that you are not sure about that you need to do some research on before making the decision.

Question	Action Plan	Answer

STAGE 2) UNDERSTANDING WHAT MATTERS

a) Initial thoughts

i) Jot down your objectives
Begin by jotting down some of the objectives you would like to see satisfied by the decision. Assign an 'importance' weighting out of ten to each. For example, one objective might be 'not being stressed out in my job', to which you assign a weighting of 6, another might be 'being a success' to which you assign as weighting of 7. Don't worry if you only think of a few things at this stage- you'll get a chance to add other things in a few moments.

My objectives in this decision are:

	/10	Objective
1		
2		

ii) Do you feel excited by this list?

iii) what matters in making the decision?
Optional: You might also like to write separately about that aren't objectives, but are important things to bear in mind whilst making this decision (e.g. I should be proactive, I should be prepared to take a risk, I shouldn't be too influenced by what x says)

1	
2	

The next steps build on your initial thoughts about what matters, by putting to you a series of thought experiments to help enlarge your perspective. As you go along, add the implicit values in your 'My career objectives' objectives.

b) Creatively thinking up other things that matter

i) Imagine a perfect day
What would you be doing, where would you be? What does this suggest about what you value?

My perfect day:
Values implicit in this day:

ii) Use your emotions as a source of values
Whom do you admire and envy? And why? What does this suggest about what you value?

Person I admire/envy	What I admire/envy about them	Values implicit in envy/admiration
Person I don't admire/envy	What I feel sorry for them	Values implicit

Some optional additional questions:-

iii) What would you like to experience in your working life?
Is there anything that you haven't already mentioned about what'd you like to *experienc*e in your working life (for example – "I'd like to enjoy my job, I'd like to have less stress, I'd like to feel appreciated, I'd like to have a laugh with colleagues")

I'd like to experience:
What extra values and objectives does this suggest?:

iv) What impact would you like to have on the world?
What about things that you don't experience directly, but nevertheless might consider important? For example – leaving the world a slightly better place, doing something meaningful? Are there any objectives in this category that you haven't already mentioned?

I'd like to have the following impact:

v) What do you think a good and well-informed friend would advise you?

vi) What do you advise a good friend placed in a similar position?

vii) What sort of person would you like to be in your decision?
(For example " relaxed, reliable, fun to work with, reliable, fair, assertive, caring, giving").

viii) Thinking about the other parties involved (if relevant)
a) Write down the names of other parties involved, and their interests and rights relating to this situation.

Person	Their interests and rights	My duties and objectives

b) Does this list suggest other things that matter to you in this situation? (for example duties you might have, or objectives you might consider)

c) Thinking more about what really matters most

i) Look back from the end of your life
How would you have liked to live it? What does this suggest about what you value?

How I'd like to look back on my life:
Implicit values and goals:

ii) Your most important objectives
You've probably added a lot of material to your objectives table on pages 1 and 2. Spend a few minutes checking that you've captured everything and that your weightings are right. Then cut and paste the most important of these to your 'My most important career objectives' below. Some people like to take the five most important objectives, others to take all objectives over a certain value (e.g. 8 out of 10). You might want to link together closely related objectives as one objective.

	/10	Objective	What is meant by this:
1			
2			
3			

STAGE 3) SEARCHING FOR OPTIONS

i) Use your objectives to generate options
Revisit the options you wrote down in stage in terms of the table you've just created ('my most important career objectives'). Use the list of what matters as a stimulus to inspire possible options. At this stage, don't veto options on grounds of quality - just say aloud and write down ideas that spring to mind.

1	
2	
3	

ii) Be wild!
Now for a bit of fun – think of a really wild idea – perhaps a career option that you've thought about, but not considered realistic, or one that's sprung to mind in the last few minutes. Add your wild idea(s).

iii) Use information sources to find other options
Use websites, books, booklets, information services, people you know and any other sources of information to find out more possible options

iv) Describe your options
Write a description of what your option might be like, over the next year, five years, ten years and twenty years for your favoured options. Consult sources of information such as websites, books, booklets, career services, people you know and any other sources of information.

STAGE 4) CHOOSING THE BEST OPTION

a) Create your Choice Table

i) Select likely options
From your long list of options, now choose some that you intuitively feel satisfy a lot of your objectives. Jot them down in the first row in your Choice Table.

ii) Add your most important objectives
Then in the second and third columns etc add your most important objectives from your 'Most important Objectives' Table:

| Options
Objectives			

b) Use your Choice Table to make your decision

i) Work out how well each option captures your objectives
Now comes the pay-off - in each cell of the table above, fill in whether or not the option fulfils the objective. A 'yes' or 'no' would be ideal, but you might need to say 'depends' sometimes. In that case write down what it depends on in the 'Further Questions' space below:

Question	Action Plan	Answer

ii) Think win-win to generate combined options
As you assess each option, it's possible that a new option, combining the best aspects of option you've already thought of , comes to mind. Or perhaps the best option is a 'portfolio' where you combine several options part-time. If so, fill this in as a new option.

My plan:

STAGE 5) IMPLEMENTING THE DECISION.

Don't move on to this stage until you are satisfied that it is reasonable to think that your chosen option really does satisfy your objectives. This might involve a fair amount of field-work e.g. speaking to people who do the job already, checking that it really does have the qualities you think it does. Then it's time to put your wise decision into practice…

i) What follow-up activities would help this solution work?
What would be the benefit of each? (it's useful to write this down to help motivate yourself)

Activity	Benefit	Target Date

ii) Possible obstacles and how can they be overcome
What obstacles might hinder you carrying out the solution and how can they be overcome?
(e.g. losing your confidence could be helped by chatting to a supportive friend.)

Obstacle	How Overcome	Target Date

CONGRATULATIONS!

Congratulations on having spent the time and energy to think through your choice. You might find it helpful to revisit your answers regularly. In particular, people have found it very useful to look at their 'Objectives' table as a reminder of what they consider important. Remember that a decision is not made once and for all. You will want to both check that your choice is satisfying your objectives and that you still value what you have identified as your objectives.

Appendix 3: Before Session Questionnaire

Please could you answer the following questions as accurately, fully and candidly as possible. By providing us with as much information as possible this will both help you and help us.

You should expect answering this questionnaire to take at least thirty minutes. Please look at your watch now and note down the time so you can calculate how long filling in this questionnaire takes you. We will be asking this later.

Time began:

Your answers to these questions will be kept in confidence.

Thank you for your time and co-operation.

The Progress Research Project thank you for your honesty and co-operation
Progress Research Project

Section 1: About You
Your contact details (these are important for contacting you for the follow up questionnaire – please tell us if they change)

Name	
Email	
Telephone	

What is your age?
[ ] under 20
[ ] 20-29
[ ] 30-39
[ ] 40-49
[ ] 50-59
[ ] 60-69
[ ] over 70

What is your gender?
[ ] male
[ ] female

What, briefly, is the decision you want to make?

How long has this decision been hanging over you?

How much time would you estimate you have spent thinking and worrying about this decision?
I think about it:
[ ] throughout every day
[ ] at least once a day
[ ] at least once a week
[ ] less than once a week
[ ] very rarely

In total how many hours would you estimate you have spent thinking and worrying about this decision?

What, specifically, has led you to wanting to resolve this now?

1	
2	
3	
4	
5	*(please press tab for further rows)*

Please rate how difficult you are finding making this decision:
[ ] impossible
[ ] very hard
[ ] hard
[ ] ok
[ ] fairly easy

Why do you find it difficult/easy?

1	
2	
3	
4	
5	*(please press tab for further rows)*

 When do you feel you might be ready to carry out your decision – whatever it is?
[ ] after six months
[ ] within the next six months
[ ] within the next week

[ ] straightaway
[ ] do not know

Why then?

1	
2	
3	
4	
5	*(please press tab for further rows)*

Section 3: About Your Decision

Write down your situation as if you were explaining it to someone who knew nothing about your situation. Start with 'headlines' (e.g. '1. I am a 35 years old male, married with no children. 2. I have recently been thinking about whether to change career direction.'). Expand on each in a sentence or two if this would be helpful.

My situation is…	
1	
2	
3	
4	*(please press tab for further rows)*

What would you like to achieve with this decision? What are your objectives/desires/goals/values?

I would like to achieve…	
1	
2	
3	*(please press tab for further rows)*

What are your concerns and worries about the decision and your capacity to carry it out?

My concerns and worries are…	
1	
2	
3	*(please press tab for further rows)*

What options have you thought of, and what do you see as the pros and cons each option?

Option 1:	
Pros	Cons
(please press tab for further rows)	

Option 1:	
Pros	Cons
(please press tab for further rows)	

(please copy and paste this table for other options you are considering)

If you had to choose right now what would you choose and why?

I would choose to… Because…	
1	
2	
3	*(please press tab for further rows)*

How confident would you be in this choice?
[ ] Completely, [ ] Very, [ ] Moderately, [ ] A little, [ ] Not at all

Why would you have this level of confidence?

1	
2	
3	*(please press tab for further rows)*

Is there anything else you wish to mention?

1	
2	
3	*(please press tab for further rows)*

Section 4: About the questionnaire

Any comments on the questionnaire?

1	
2	
3	*(please press tab for further rows)*

Do you think that filling in this questionnaire has helped you in making your decision in any way?

	Yes / No (delete as applicable) If yes – it has helped by…
1	
2	
3	*(please press tab for further rows)*

How long did it take you to do this questionnaire (honestly!)?

[ ] up to 30 minutes
[ ] 30 minutes to an hour
[ ] One hour to ninety minutes
[ ] Ninety minutes to two hours
[ ] Over two hours [please say how long]:

Appendix 4: Post Session Questionnaire

The Progress Research Project thank you for your honesty and co-operation
Progress Research Project

Section 1: About Your Decision
Have you come to a decision? Yes / No *(please delete as applicable)*

If yes:
What is it?

My decision is to.

The level of confidence I have in this decision is:
[ ] Complete, [ ] A lot, [ ] Some, [ ] A little, [ ] None at all

Why do you have this level of confidence?

I have this level of confidence because…	
1	
2	
3	
4	
5	*(please press tab for further rows)*

If no:
I think I am better placed to make a decision than before the session:

[ ] Very much, [ ] A lot, [ ] Somewhat, [ ] A little, [ ] Not at all

Why do you think you are this well placed?

	I feel this well placed because…
1	
2	
3	
4	
5	*(please press tab for further rows)*

Section 2: Your Analysis Of The Progress Procedure

Overall I think *Progress* helped me in my decision-making:
[ ] Very much, [ ] A lot, [ ] Somewhat, [ ] A little, [ ] Not at all

What do you think were the key moments/insights/questions/events in the session that helped you?

	Key moment/insight/question/event	How it helped
1		
2		
3		
4		
5		
6		
7		
8		
9	*(please press tab for further rows)*	

Progress helped clarify what I was trying to decide about:
[ ] Very much, [ ] A lot, [ ] Somewhat, [ ] A little, [ ] Not at all

Please explain your answer:

1	
2	
3	
4	
5	*(please press tab for further rows)*

Progress helped improve my understanding of the situation:
[ ] Very much, [ ] A lot, [ ] Somewhat, [ ] A little, [ ] Not at all

Please explain your answer:

1	
2	
3	
4	

5	*(please press tab for further rows)*

Progress helped me deal with the emotional side of making the decision:
[ ] Very much, [ ] A lot, [ ] Somewhat, [ ] A little, [ ] Not at all

Please explain your answer:

1	
2	
3	
4	
5	*(please press tab for further rows)*

Progress helped my understanding of what mattered (my values, objectives and goals) in connection with my situation:
[ ] Very much, [ ] A lot, [ ] Somewhat, [ ] A little, [ ] Not at all

Please explain your answer:

1	
2	
3	
4	
5	*(please press tab for further rows)*

Progress helped me identify possible options:
[ ] Very much, [ ] A lot, [ ] Somewhat, [ ] A little, [ ] Not at all

Please explain your answer:

1	
2	
3	
4	
5	*(please press tab for further rows)*

Progress helped me choose an option:
[ ] Very much, [ ] A lot, [ ] Somewhat, [ ] A little, [ ] Not at all

Please explain your answer:

1	
2	
3	
4	
5	*(please press tab for further rows)*

Progress helped me carry out my decision:
[ ] Very much, [ ] A lot, [ ] Somewhat, [ ] A little, [ ] Not at all

Please explain your answer:

1	
2	
3	
4	
5	*(please press tab for further rows)*

If you think *Progress* helped you in some way other than your situation, values, emotions or options can you say what this was.

I was further helped by:	
1	
2	
3	
4	
5	*(please press tab for further rows)*

Do you think that *Progress* hindered you in any way in your decision-making?

I was hindered as:	
1	
2	
3	
4	
5	*(please press tab for further rows)*

What is your overall assessment of *Progress*?

My overall assessment of *Progress* is…	
1	
2	
3	
4	
5	*(please press tab for further rows)*

Section 3: Comparison With Other Forms Of Help You Have Received

What others forms of help have you received with this decision (both professional and non-professional – for example friends and family) and what advantages did these forms of help have that *Progress* did not provide?

Form of help	Advantages not provided by *Progress*	How this helped me in this decision
(please press tab for further rows)		

What advantages did *Progress* have that these other forms of help did not provide?

Advantages	How this helped me in this decision
(please press tab for further rows)	

Section 4: Further Comments

What did you like about the way your consultant facilitated the process?

1	
2	
3	
4	
5	*(please press tab for further rows)*

What suggestions can you give to improve the facilitation:

1	
2	
3	
4	
5	*(please press tab for further rows)*

Any comments on the questionnaire?

1	
2	
3	
4	
5	*(please press tab for further rows)*

Any other feedback?

1	
2	
3	
4	
5	*(please press tab for further rows)*

How long did it take you to do this questionnaire (honestly!)?

[ ] up to ten minutes
[ ] over ten to twenty minutes
[ ] over twenty to thirty minutes
[ ] over thirty minutes to one hour
[ ] over one hour (please say how long)

Appendix 5: Follow-Up Questionnaire

Section 1: About Your Decision

Did you carry out the decision from your **Progress** session? Yes / No *(please delete as applicable)*

What was this decision?

My decision was to….

If you answered 'yes' to question 1, please answer questions 3 - 6
How satisfied are you with the decision?
[ ] Completely, [ ] A lot, [ ] Somewhat, [ ] A little, [ ] Not at all

Please explain your answer.

I am this satisfied with my decision because…	
1	
2	
3	
4	
5	*(please press tab for further rows)*

Do you have any regrets about your decision?

[ ] Complete, [ ] A lot, [ ] Some, [ ] A few, [ ] None at all

Please explain your answer.

The regrets I have with my decision are…	
1	
2	
3	
4	
5	*(please press tab for further rows)*

If you answered 'no' to question 1, please answer questions 5 - 12
Why did you not carry out the decision?

1	
2	
3	
4	
5	*(please press tab for further rows)*

What did you do?

How satisfied are you with this decision?
[ ] Completely, [   ] A lot, [ ] Somewhat, [ ] A little, [ ] Not at all

 Please explain your answer.

I am this satisfied with my decision because…	
1	
2	
3	
4	
5	*(please press tab for further rows)*

Do you have any regrets about your decision?
[ ] Complete, [ ] A lot, [ ] Some, [ ] A few, [ ] None at all

Please explain your answer.

The regrets I have with my decision are…	
1	
2	
3	
4	
5	*(please press tab for further rows)*

Section 2: Your Assessment of the Progress Procedure

Looking back how do you rate the usefulness of the *Progress* procedure in making your decision:
[ ] Very good, [ ] Good , [ ] Somewhat, [ ] A little, [ ] Not at all

 Please explain your answer.

I rate *Progress* this useful because…	
1	
2	
3	
4	
5	*(please press tab for further rows)*

 Has the *Progress* session had any influence on how you have made decisions subsequently?
[ ] Very much, [ ] A lot, [ ] Somewhat, [ ] A little, [ ] Not at all

Please explain what the influence has been, or why it has not influenced you:

Would you use the *Progress* procedure, on your own or with help, for other important decisions?
[ ] Yes, [ ] Very probably, [ ] Maybe, [ ] Probably not, [ ] No

Please explain your answer:

How well do you think you could use the *Progress* procedure without further training?
[ ] Very well, [ ] Well, [ ] Somewhat, [ ] A little, [ ] Not at all

Please explain your answer:

Do you think other people would benefit from the *Progress* procedure in making their decisions?
[ ] Yes, [ ] Very probably, [ ] Maybe, [ ] Probably not, [ ] No

Please explain your answer:

 In the *Progress* session, we identified a set of values (what matters) relevant to your decision. Do you think you have used this set of values to guide any further decisions you have made?
[ ] Very much, [ ] A lot, [ ] Somewhat, [ ] A little, [ ] Not at all

 Please explain your answer:

Below is the list of values (what matters) identified in your session. Please could you fill in the table stating how important these values seem to you now.

Value		Importance (0 –10)

With hindsight, what do you think anything important was not covered well enough or completely missed in your *Progress* session? How could this have been better dealt with?

	What was not covered well enough or missed	How it could have been dealt with better
In understanding your situation		
In clarifying the nature of your decision		
In working on your emotions		
In clarifying your values		
In identifying your options		
In choosing your best option		
In carrying out your decision		
In anything else		

Do you have anything further you wish to say about *Progress*?

1	
2	
3	
4	
5	*(please press tab for further rows)*

Section 3: Comparison With Other Forms Of Help You Have Received

What others forms of help have you received with this decision (both professional and non-professional – for example friends and family) *after* your *Progress* session and what advantages did these forms of help have that *Progress* did not provide?

Form of help	Advantages not provided by *Progress*	How this helped me in this decision

(please press tab for further rows)		

What advantages did **Progress** have that these other forms of help did not provide?

Advantages of **Progress**	How this helped me in this decision
(please press tab for further rows)	

Section 4: About The Questionnaire

Any comments on the questionnaire?

1	
2	
3	
4	
5	*(please press tab for further rows)*

Any other feedback?

1	
2	
3	
4	
5	*(please press tab for further rows)*

How long did it take you to do this questionnaire (honestly!)?

[ ] up to ten minutes
[ ] over ten to twenty minutes
[ ] over twenty to thirty minutes
[ ] over thirty minutes to one hour
[ ] over one hour (please say how long):