Operational Risk Assessment in a Higher Education Institution
A Social Systems Perspective

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PhD Thesis

Abstract

The Higher Education Funding Council for England (HEFCE) has recommended the implementation of operational risk management in universities since 2001. This case study investigated risk assessment in this context, aiming to critically examine variety in different groups in a single institution. Social Systems Theory formed a framework to create new insights into reflexive understandings of risk, utilising data from interviews, and group discussions during risk assessment training. The study makes a significant contribution to knowledge about real-life risk assessment practices, revealing two parallel and unrelated systems. Firstly, the formal process exhibited calculative difficulties. Assessment discussions relied on qualitative data, historical events and narrative accounts to assess potential severity and frequency, with 19 of 20 participants unwilling to assign risk ratings. Secondly, existing management controls demonstrated successful mitigation of risks, particularly in relation to funding access, but were not recognised as 'risk management', hampering the integrated approach recommended by HEFCE. The influence of group illustrated that the rating of risk could vary, as could the type of risk that caused concern. In addition, boundaries associated with group roles influenced the attribution of responsibility, illustrated by academic unwillingness to be involved with formal risk management processes. Risk acceptability differed between groups and individuals, making it difficult to establish a single risk appetite that reflected all organisational views. Uncertainty was evident in the formal process in lack of clarity of strategic aims, absence of data and unpredictability of future events, particularly in relation to the actions of others. Most significantly, risk prioritisation had to contend with conflicting perspectives and competing organisational aims, including those of the regulator. In the context of 'New Public Management', metrics and assessment methods provided a focus for organisational change. Risk mitigation was ongoing and evident, but completely disconnected from the implementation of the HEFCE risk management process.

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List of Appendices

List of Abbreviations

ALARP	As Low As Reasonably Practicable
BHS	School of Biomedical & Health Sciences
BS	British Standard
DDE	Director, Detector, Effector
DI	Dental Institute
E&F	Estates & Facilities Department
EFQM	European Foundation for Quality Management
ERM	Enterprise Risk Management
ESRC	Economic & Social Research Council
HE	Higher Education
H&S	Health & Safety
HEFCE	Higher Education Funding Council for England
IRR	Internal Rate of Return
ISO	International Standards Organisation
NPM	New Public Management
NPV	Net Present Value
PCT	Principal's Central Team
PFI	Private Finance Initiative
PPP	Public Private Partnership
QAA	Quality Assurance Agency for Higher Education
RAE	Research Assessment Exercise
RMAG	Research Management Advisory Group
SLA	Service Level Agreement
SST	Social Systems Theory
SWOT	Strengths, Weaknesses, Opportunities, Threats
VAR	Value at Risk

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1 Introduction

This introduction synthesises the motivating factors for the study and sets out the content and contribution that my research makes to the understanding of operational risk assessment practices in Higher Education Institutions. It outlines the structure of this thesis and poses some fundamental questions such as; why this subject? Why is it important? How have I contributed to the body of knowledge in this area and what are my main findings? Through the course of this thesis, I will elaborate upon these issues. In posing and addressing these questions, I acknowledge previous research in the field of risk assessment and my research findings are set in the context of those studies.

1.1 The Research Problem

The research questions are framed against the use of formal risk management models in an increasing number of organisations, in both the private and public sectors. There is little literature that reveals how operational risk assessments, recommended by such frameworks, are performed. The focus of the first research question investigates organisational practices to identify how risk assessments are carried out. The literature suggests that risk interpretation differs between different groups and individuals within an organisation, and the second research question investigates whether the organisational setting of the risk assessment affects the way it is conducted. The assessment of risk needs to be set in the context of what constitutes acceptable risk for the organisation, and the third research question examines what is tolerable risk to individuals in the University and what factors influence their understanding. The nature of operational risk suggests that the likelihood and severity of potential risks occurring cannot be calculated using historical data to form statistical analyses, and the final research question examines the uncertainties apparent during risk assessment activities. The careful development of these questions over the course of the study, provides the foundation to build a detailed exploration of the nature of operational risk assessment and the following sections outline in more depth the research problem that this study investigates.

1.2 The Aims of the Thesis

The aim of this study is to describe, compare and analyse operational risk assessment activities in different groups within a single institution and to critically examine and understand the influences shaping them. In addition, it identifies recommendations for the research sponsor and regulator, providing practical guidance to improve and embed the implementation of risk management in organisations.

1.3 Setting the Scene

Trends in public sector governance encourage the normative use of private sector models in Higher Education Institutions (HEIs). The guidelines issued by the Higher Education Funding Council for England (HEFCE) recommend the implementation of operational risk management in all Universities (HEFCE, 2001; 2005). Operational risk has been defined as a category that captures all organisational risks, in which the emphasis is placed on inclusion of less measurable and more qualitative aspects of risk (Mikes, 2009). The recommended framework, derived from the private sector Enterprise Risk Management model, is described (HEFCE, 2001) as an integrated control system and risk is conceptualised as failure to achieve the aims of the organisation, with an emphasis on the ability to seize opportunities, and is consequently linked to organisational strategy. This interpretation of risk forms the foundation for the exploration of operational risk within this thesis. The process relies on the use of risk assessment to identify and prioritise organisational risks. There is little available evidence about the use of such formal methods within organisations:

> However, in spite of all this normative emphasis on the use of formal analysis, surprisingly little is actually known about how it is used in practice in organizations, especially at the top management level (Langley 1998, p51).

Risk management as an idea and a more or less standardised set of practices is central to both private sector companies and public sector organisations (Miller et al, 2007; Power, 2007).

> Risk management is the formal process by which individuals, organisations and societies assess and address risks in accordance with overall objectives (Fone & Young, 2005, p15).

The broad nature of this definition suggests that the concept of risk in an organisational context covers a wide range of possible threats and opportunities.

> 'Risk' is often not clearly identifiable and manageable, but emerges and is constructed from complex and necessarily incomplete processes of organizational attention involving information systems, incentive structures and narratives of explanation which are the source of further uncertainties (Scheytt et al, 2006, p1333).

This thesis investigates risk assessment, rather than risk management and mitigation as a whole, because the assessment process incorporates revealing features about how risks are interpreted, particularly in the identification and assessment stages of the process. These, in turn, shed light on risk management practices more generally, including the strategy process and its contribution to local interpretations of organisational aims and how to achieve them.

1.4 Motivations of the Study

My initial motivations for undertaking this study came from the 'world of work' and my experience working as a Quality Engineer/Manager in a hi-tech engineering organisation[1]. I became aware of the increasing use of risk assessment in an ever-widening range of activities, raising questions about how these models work in the absence of historical data. Furthermore, it dawned on me that my role consisted of identifying and implementing process improvements (both for administrative and production systems), that were essentially risk management, but usually without any formal risk assessment,

[1] From 1986 at GEC Hirst Research Centre, merged into GEC Marconi Advanced Technology Centres in the 1990s, and transferred to BAE Systems, Product Assurance Group in early 2002 until 2003.

and not recognised as ‘risk management’. I wanted to find out more and understand the relationship between these two facets of operational risk.

At around this time, I gained the opportunity to study the implementation of risk management in a university. The access enabled investigation of how private sector management techniques are implemented in the public sector, a change that has been described as ‘New Public Management’ (NPM) (Dunsire, 1999). These changes include the use of targets and measures to assess the performance of organisations, the efficacy of which has been questioned:

> Ironically perhaps, just as the targets system was collapsing in the USSR, the same basic approach came to be much advocated for public services in the West by those who believed in ‘results-driven government’ from the 1980s (Bevan & Hood, 2006).

In addition, the mode of governance has shifted towards self-regulation (Ayres & Braithwaite, 1992) with associated monitoring based on self-reports and the study participants provide illustrations of what constitutes compliance from their perspective.

The use of ‘best practice’ risk management is recommended by HEFCE (2001 and 2005), mirroring private sector guidance. When codes contain ‘best practice’, it implies that they describe ways of working that have proved successful. The idea is to imitate certain exemplary companies, although there is much debate in the academic literature about what these practices should be (Taylor, 1911; Burns & Stalker, 1961; Peters & Waterman, 1982; Mintzberg, 1983; Deming, 1986; Kanter, 1989). For many fields, those contributing to governance codes would possess particular expertise in that context. Seidl (2007) notes that in contrast to many other areas of standard setting, the claim of expertise in risk management does not rest so much on scientific knowledge as on practical experience. This study investigates what ‘best practice’ risk management looks like. It does not assume an associated improvement in the performance of the organisation, but analyses how the participants view the formal process and its effectiveness.

In the case of the HEFCE risk management framework, non-compliance constitutes a risk to the organisation, and completion of the risk register satisfies the governance requirements, even if there is little other benefit to the organisation or group. However, the functional benefit of the activity is unclear.

> In many cases, the 'risk registers' employed by universities in compliance with the Funding Council's requirements are little more than exercises in institutional neurosis. Such items as 'low retention' or 'student complaints about teaching' are merely symptoms to watch out for in deciding whether things are going wrong, and whether we are 'at risk'. Used in this way, the concept of 'risk' tells us nothing about the likelihood of a danger occurring and the factors that might cause it; and, because it has little analytical value, it cannot provide a basis for effective action (Raban & Turner, 2006, p40).

Broadbent & Laughlin (1997) question whether risk management models improve organisational performance in any context, but it is also important to consider whether private sector approaches are appropriate to an academic environment. There is resistance to change in both sectors.

> New ideas, whether in the private or public sector, are often perceived as incompatible with the organizational context. This is particularly the case when the phase of change moves from design to operationalization and implementation of the new ideas, leading to the need to perform organizational tasks and practices in new ways (Stensaker & Falkenberg, 2007, p174).

Implementation is the part of strategy that fails (Sillince & Mueller, 2007) and the introduction of risk management within HE faces a number of difficulties:

> In reality, planning from the top is one thing, implementation quite another and HEFCE is very thin with advice on cracking this particular problem, noting only that planning needs to be *'embedded'* and that *'senior management teams need to consider what obstacles exist and how they will be managed' (HEFCE, 00/24, p4)* (Dearlove, 2002, p365).

Furthermore, Dearlove observes that planned organisational change rarely works, and if it does not work for government and for big business, suggests that there are good reasons why it is even less likely to work in a university.

> Universities tend to be bottom-heavy, with solid professional authority held by academics in disciplines down in the departments. The departments are invariably loosely coupled into a federal system in which the central administration lacks the capacity, and often the

> inclination, to ever give an order because it knows that it lacks the clout to ensure compliance (Dearlove, 2002, p356).

Increasing student numbers on many courses, and measures associated with the number and quality of research publications, place significant demands on academics; formal risk management activities constitute an unwanted addition to an already busy schedule.

The use of risk management in the private sector is often conceptualised as the maximisation of profit, which would be inappropriate for institutions such as Universities. However, failure to achieve the aims and goals of an institution can provide an alternative focus for risk in both the private and public sectors:

> Risk management is inseparable from strategy planning, from goal setting and implementation through to operational management (BS31100, draft for comment, 2007).

The increased use of targets and measures within HE, against which rewards or sanctions can be applied, increases transparency and accountability in relation to organisational performance (Roberts, 2009). Consequently, HEFCE's aims become a source of risk for the HE sector, especially when they relate to funding and performance measures. It is notable that the University Mission statement mirrors the stated HEFCE objectives.

In-depth study was essential to investigate the chosen research questions, since universities are complex organisations (Perrow, 1986*)*. Complexity means being forced to select between elements and a multitude of possible actions, or no action. Hyper-complexity exists when there are competing descriptions of this complexity (Luhmann, 2002), as is postulated to be the case between different groups in an organisation. Such variations within the organisation result in differing emphases on the type of risks that cause concern. The link to aims suggests the presence of competition and conflicting views within the institution, and the purposeful selection of workshop groups was designed to explore this notion.

> Situations of decision making under goal ambiguity are common in complex organisations (Cohen et al, 1972, p1).

The organisation has to manage the presence of competing, and in some cases conflicting aims. The multiple and changing objectives of the organisation are reflected in risk identification, revealing institutional and local strategies through participant descriptions of organisational aims as a source of risk, shedding light on how strategy is communicated and understood.

The 'corporate risk register' provides multiple views of risk and can be interpreted as an attempt to reduce uncertainty through pooling perceptions and judgments.

> In pursuing an understanding of organizational history, greater reduction in uncertainty can often be achieved by pooling observers than by pooling events, particularly if observers are relatively independent (March et al, 1991, p8).

The HEFCE framework recommends the use of sub-group assessments. However, there is little guidance about who exactly should participate in the process. The research investigates who participates and how participants describe the formal process, to examine the internal implementation of the governance.

The HEFCE guidance (2001; 2005) suggests that risks should be rated and ranked, requiring values to be assigned. Furthermore, to determine the need for mitigation, this measure should be compared to a pre-defined value denoting acceptable risk, placing emphasis on those risks that are most likely and have greatest impact. This thesis investigates quantification difficulties, and questions the value of numerical or qualitative label outputs (low/medium/high) in operational risk assessments if such ratings do not represent a form of measurement (Power, 2004b). This focus accepts broad issues, such of lack of clarity about the aims of the organisation, may contribute to failure to successfully embed risk management, but if the assessment process itself is flawed, we need to understand how and why. If risk ratings are inflated, the risk register will contain many insignificant risks, forming an unwieldy and unhelpful document. The opposite outcome would mean that narrative accounts of significant risks would be excluded from top-level risk reporting if the values assigned are below the acceptable threshold. Utilising values to assess the

probability and severity of risks, assessments have to deal with problems arising from qualitative judgements:

> Risks are increasingly becoming a matter of our decisions or our failure to make decisions. However, neither our own decisions nor the decisions of others are easy to calculate, because they are made in the flow of interacting networks. The outcomes are not decidable in advance but emerge as a result of self-producing or autopoietic operations (Gregersen, 2003, p364).

There has been a significant shift in the ontology of risk from its traditional use within the insurance industry. In the 17th Century, actuarial approaches to risk assessment calculated the likelihood and severity of unwanted events using historical data. In the past 50 years, the ontology of risk in organisations has drifted towards a meaning aligned with organisational achievement of aims, both beneficial and harmful. Assessment of operational risk frequently lacks data to enable a quantitative assessment of risk that provides meaningful predictive values, yet faith in the numbers generated in the process remains linked to the earlier meaning of risk. In this complex organisational context, the study considers how enforced use of qualitative data to assign risk values influences assessment outcomes. The perspective does not aim to evaluate risk assessment outcomes in relation to normative guidance or accuracy since:

> Statements about contingent events of the future cannot now be classified as either true or untrue, it can only be observed later (Luhmann, 1998, p50).

Another factor preventing purely computational risk assessment is the fact that the definition of what is harmful is to a certain extent observer relative (Gregersen, 2003). Academic literature contains many critiques of quantitative risk assessment and its limitations (e.g., Kunreuther et al, 1984; Horlick-Jones, 1998; Feldman, 2004), but there is little evidence about the factors influencing qualitative assessment. The discussions may provide useful and critical insights into risks and causes, forming a narrative contribution to the register, despite the difficulty of providing the definite answers desired (Kunreuther & Slovic, 1996).

Furthermore, variation in the types of risk identified, not just the assigned values, forms another significant area of interest. Risk identification reflects the

organisational context and setting for individuals in different groups within the Institution:

> A risk is always a danger of something (sometimes natural, sometimes social) for somebody in a given social nexus. In this sense, the meaning of risk conforms with the semiotic triangle as laid out by the pragmatist philosopher Charles Sanders Peirce: A meaning means something (the content of meaning) for somebody (the interpreters) in a given situation (the context of meaning). Thus, risks tend to crisscross the borderlines of the natural and the cultural (Gregersen, 2003, p356).

This study explores how risk identification differs between groups within an institution and what factors generate meaning for local actors. In such semiotic triangles, it is possible for the content of meaning to be interpreted differently because of differences in situation and the perspective of individuals within groups.

Participant narratives illustrate what is acceptable risk to individuals and groups in the University, and what factors influence this understanding. The idea that risk tolerance is linked to degree of control (Adams, 1995) draws responsibility and authority into risk management activities. The study investigated whether risk acceptability displayed similar characteristics within and between groups. The use of narrative data enabled the influences behind such understandings to be drawn-out and analysed. In addition, authority to act is an important factor in the selection of risks for mitigation activities, bringing the relative power of groups or individuals within the institution into the scope of this thesis.

The qualitative aspects of operational risk assessment led to curiosity about uncertainty in the process. In particular, what kinds of uncertainty were evident and how did risk assessment activities handle uncertainty? Uncertainty related to lack of information, lack of clarity about achievement of objectives and the difficulty of predicting future events with any certainty.

> Risk is subjective. It is a word that refers to a future that exists only in the imagination (Adams & Thompson, 2002, p1).

Case study data revealed the types of uncertainty present. How research participants treated lack of clarity when assessing risk formed an important element of the study.

> What is needed is extensive empirical work to discover how human beings actually make choices in the face of uncertainty, especially uncertainty about the actions and reactions of other human beings (Simon, 1997b, p127).

The HE sector exhibits characteristics that are particularly relevant to the investigation of unquantifiable risks. Such organisations are a class of knowledge organisation whose asset base is predominantly intangible, and whose risks change and develop in response to the regulatory environment (Power et al, 2009).

Also of significant interest are participants' views of risk registers, illuminating the HEFCE model and the interpretation of governance aims. Luhmann (1995a) suggests that social systems, such as organisations, are constituted on communicative events that provide a stimulus for action, a view echoed in research into organisational sense making.

> Organisations are built, maintained, and activated through the medium of communication (Weick, 1990; quoted in Allard-Poesi, 2005, p174).

To answer the research questions, the study investigates communication about risk to reveal regularities and systematic associations in risk interpretation.

1.5 Methodology & Method

The methodology for the study takes a Middle-Range Thinking approach (Laughlin, 1995; 2004), in which it is acknowledged that it is not possible to study a positivistic, unchanging social world, where the truth can be established through careful research and experiment, but the contrary view that interpretation of findings provides insights but cannot draw more general conclusions is also rejected. As the name Middle-Range Thinking suggests, this study steers a middle course between these and takes the view that some generalised observations linked to theory, contributing to knowledge, can be

made. The approach requires the use of theory to reduce subjective influences, while accepting that it is not possible for the researcher to step outside the social world to study it, emphasising the importance of reflecting upon the role of the researcher. This thesis takes a constructivist approach, in which differing views are considered equally valid from the perspective of the participants.

The data collection was undertaken in two distinct phases from March to June 2005 and from January to May 2007. The first stage comprised semi-structured interviews conducted with senior staff in 20 Departments and Schools across the whole organisation. With little prior theorisation in relation to analysis of operational risk assessment, preliminary analysis in Phase 1 was exploratory and not theoretically motivated. A framework of risk types was used initially to confirm the validity of the chosen research problem, and to refine research questions for the study. The first stage findings also provided input to second stage research sampling and choice of theoretical approach.

While searching for suitable theories and models through which to investigate operational risk, the Director, Detector, Effector model (Hood & Jones, 1996) mapped onto the HEFCE risk management model, making it an ideal choice for normative assessment of the implementation of governance. To examine risk meaning through risk identification and assessment a second theory was necessary, and Luhmann's Social Systems Theory (1995a) provides a complex and comprehensive framework to investigate reflexive risk processes.

The second stage gathered data from three groups selected from the University that forms the unit of analysis in this thesis, through provision of risk management training in workshops, based on HEFCE guidance (2001; 2005). Operational risk assessment workshops illustrate the way that individuals in institutions are subject to a complexity of pressures, reflected in their interpretations of risk. Further perspectives were elicited during follow up interviews with workshop participants.

All interviews and workshops were recorded and content analysis of transcriptions forms the method for generating the research findings and

research validity relies on faithful reproduction of representative quotes. To prevent harm to the sponsoring organisation, this thesis content has been anonymised. The analysis utilised the theoretical framework developed to access the key themes from both phases of the study. A cross-case analysis draws together the findings from Phase 1 and Phase 2 to address the research problem and questions asked.

1.6 The Case Study Organisation

The University is one of the oldest and largest in the UK with 13,800 undergraduate students and 5,300 postgraduates in nine Schools of study (University web site 7/2/7). The University has benefited from changes to research funding allocation; it is in the top group of universities for research earnings, with income from grants and contracts of more than £101 million during 2004-05 (University web site 7/2/7). The University is a member of the Russell Group, an association of 20 research-intensive universities in the UK. In 2006/07, Russell Group Universities accounted for 66% (over £2.2 billion) of UK Universities' research grant and contract income and 68% of total Research Council income (Russell Group website 30/7/9).

The implementation of HEFCE Risk Management governance led to the Risk Management Policy and production of a Corporate Key Risks document (Risk Register). This represents ranked risks to the organisation, compiled by amalgamation of local Risk Registers. At the University, annual completion of this document by each School or Department for review by the Principal's Central Team (PCT) is an interpretation of governance aims. Formal responsibility for preparation of local Risk Registers is assigned to Heads of School. Case study analysis reveals the methods of implementation of the initiative in different parts of the University.

1.7 Outline of Thesis

This chapter has highlighted the research problem; introduced the research topic; indicated the research objectives and outlined the underlying motivation behind the research.

Chapter 2 provides an in-depth review of the literature this study contributes to. It examines the evolution of risk management practices and the problematic nature of risk and risk management to illustrate the motivation for developing greater understanding of these practices in a real-life context. It outlines private sector governance reforms and the adoption of private sector practices in Higher Education, including a review of HEFCE risk guidance, to provide the context for the study. The chapter concludes by summarising existing empirical studies of risk to highlight the need for additional work in this field.

Chapter 3 reviews the process of theory selection and the underlying reasons for adopting two theoretical approaches for the analysis. The key theoretical aspects of each selected theory are elucidated to illustrate their use in this study.

Chapter 4 explains the emergence of the research methodology used in the study. It explicates the study focus and states the Research Questions. The beliefs underlying research approach are explored in relation to ontology, methodology and Middle-Range Thinking. It goes on to document the research process, including the case study design, data sources, narrative and document analysis, the development of the analytical frameworks used and cross-case analysis. The chapter concludes by considering the validity and research relevance of the study outputs.

Chapter 5 presents the research findings from Phase 1 of the study. The chapter begins with an overview of the aims of the University, elicited during the interviews. The subsequent chapter headings are derived from the research questions, with sub-sections developed from the interaction of data with theory, informed by relevant literature, to facilitate analysis of the narratives.

Chapter 6 presents the data gathered during Phase 2 of the study. With the exception of the overview of aims, which were not elicited from individuals in workshop groups, it follows the format of chapter five, to facilitate data comparison. It utilises the theoretical frame outlined in the methodology section of this thesis to draw out features of interest from the embedded cases.

Chapter 7 brings together the previous two chapters to address the research questions specifically using cross-case analysis and highlights a number of significant findings. It follows the layout of the previous two chapters with the addition of normative analysis and a review of contemporaneous risk registers.

The concluding Chapter 8, takes the analysis of data from the previous chapter to illustrate how the findings contribute to the literature discussed in chapter two. It goes on to examine the value of the SST theoretical frame, the limitations of the research and makes suggestions for further work to build on these findings. The thesis concludes with a summary of the significant contribution to knowledge that this study makes.

1.8 Summary

This chapter has introduced purpose and aims of this thesis, providing the justification and motivation for this research. My unique access to the practice of risk management in one institution, the long-term nature of the data collection project and the use of theoretical perspectives to enable broad generalisations to be developed, contribute significantly to an area that is under researched. The empirical contribution is important since there are few existing studies of this kind. By overcoming difficulties of access and confidentiality, the study illuminates risk assessment practices and the implementation of risk management processes in a real organisation. The next chapter provides an overview of the literature that informs the study, and critically examines the problematic nature of risk, the expansion of risk management practices in the private sector, the changing regulatory environment, HEFCE risk management guidance and previous studies of risk in organisations.

2 Literature Review

2.1 Introduction

This chapter examines the academic literature in the field of risk, to which this study contributes, and sets the scene for the case study, identifying a need for critical examination of the influences shaping risk assessment activities. The chapter will begin with a brief review of the evolution of risk management practices, leading into a discussion of the problematic nature of risk and risk management. The next section will outline the requirements for adopting the private sector guidance, and how the HEFCE risk management governance is underlain by the private sector philosophy, most notably the Turnbull Guidance (ICAEW, 1999) that emphasises the relationship between a well-managed organisation and the ability to control risk.

> In the best-run organisations, risk management is synonymous with good management and good governance. It is not considered as a bolt-on to existing practices, or a separate exercise simply to meet regulatory requirements (HEFCE, 2005, p2).

The chapter moves on to examine regulatory changes and the elements of the HEFCE risk management guidance in the light of management control more generally. Finally, the availability of empirical studies that examine how risk management systems function generally, and specifically in the Higher Education (HE) context, will illustrate gaps in the literature and demonstrate the need for in-depth case studies of risk management practice.

2.2 Evolution of Risk Management Practices

The study of risk has a long history and calculative tools began to emerge in the mid 1600s when the mathematicians Pascal and Fermat solved a problem about division of stakes in an unfinished game of chance, enabling people to make decisions and forecast the future with the help of numbers (Bernstein, 1996a). In 1730, Abraham de Moivre suggested the bell curve distribution and discovered the concept of standard deviation, which are essential ingredients for quantifying risk. Probability theory was used to develop tables of life expectancies and by the middle of the 1700s, marine insurance emerged with

practical use of risk calculations (The Society of Lloyd's of London was established in 1771). In 1875, Francis Galton discovered regression to the mean (Bernstein, 1996a). The basic tools for predicting risk were available, noting the proviso that such calculations require stochastic inputs or data for which a statistical distribution can be determined.

As a management practice, project risk management began to emerge in the 1970s. Prior to this, risk was little discussed and its effects on organisations ignored (Merna & Al-Thani, 2008). The US Environmental Protection Agency completed its first risk assessment document at the end of 1975. As project risk management developed through the 1980s an emphasis on quantitative analysis predominated, with use of tools such as Programme Evaluation and Review Technique (PERT) focussing on time and cost objectives (Merna & Al-Thani, 2008). In the 1990s, the scope of risk management expanded to consider a wider range of risks, with a larger set of analysis tools, albeit in a fragmented way.

To frame these changes from the perspective of a quality engineer[2], I first became aware of risk assessment as an organisational control to satisfy Health & Safety and Product Safety requirements in the early 1990s (HSE, 1992). The risk assessment rating and acceptability grid (Figure 2.1) became familiar for calculating probability and severity of physical hazards. In the mid 1990s, collation of project risk data became part of my routine. There was no integration of different types of risk to form an overall picture of threats to the organisation up until the time I left in 2003, when corporate risk registers began to be mentioned. The internal management system audits that brought significant 'deficiencies' to senior management attention were not viewed as risk management controls, raising the question of what constitutes risk. This brief historical overview provides the background for the discussion of the ontology of risk and it's relationship to risk management that follows.

[2] Working for GEC-Marconi, later part of BAE Systems

2.3 Problematic Nature of Risk and Risk Management

This section will review risk definitions and interpretations, linked to developments outlined in the previous section, and provide the basis for understanding difficulties associated with operational risk assessment and risk management. All risk concepts have one element in common, the distinction between reality and possibility (Renn, 1992). The question of whether risk is understood as a socially constructed idea is explored in this section, especially in relation to organisational control. Operational risk is significant as an assembly point for existing risk management practices, as a category of attention and visibility for risks that were either ignored or made insufficiently explicit previously (Power, 2003). This includes potential losses resulting from inadequate systems, management failure, faulty controls, fraud and error (Crouhy et al, 2006). However, there is no agreed definition of risk in organisations.

> … there is a general lack of consensus on the definition of risk in the management literature, and numerous definitions have been proposed (Berry et al, 2005, p286).

Within the HE context, a HEFCE study (HEFCE, 2001, see Figure 2.2), demonstrates that risks identified in 48 Universities include physical hazards, but these represent a small fraction of stated risk categories. The majority relate to failure to achieve aims, and illustrate how risk identification relates to both internal and external goals. Consequently, opinions and values influence ways of seeing and measuring outcomes, and these change recursively, forming iterative cycles of 'socially constructed' (Hacking, 1999) risk. Adams (1995) describes risk as an 'interactive phenomenon'. Risks have an iterative nature, in which individuals balance the rewards and dangers. Risks are not static; rather they emerge and change over time (Berry et al, 2005).

Furthermore, in preventing dangers, or first-order risks, organisations and individuals incur, by virtue of their actions or omissions, an unforeseeable array of second-order risks e.g., widespread use of antibiotics to cure infections increases the risk of bacteria developing resistance and becoming more deadly (Gregersen, 2003). In HE, satisfaction of 'widening participation' targets may

increase financial risk associated with student progression targets. In addition, risk to reputation presents a particular form of secondary risk pervading organisations. Consequently, organisations and individuals become sensitive to releasing information that might lead to blame (Hood, 2007) resulting in a form of procedural risk aversion.

Risk studies in cognitive psychology have investigated individual risk perceptions to understand how people reason under conditions of uncertainty (Slovic, 1987; Fischhoff et al, 1981). Laboratory experiments found that when faced with complex problems involving probability or frequency estimates, people apply certain discernable rules of judgement, termed heuristics, to simplify the problem. Slovic (1987) identified qualities that raise risk perception in relation to hazards, however, Gardner (2008) suggests their value is limited since the source of such judgments typically is gut; head will rationalize the decision, but is unable to access the black-box of gut, so we don't really know what the reasons are.

> Slovic acknowledged that at the time they thought people were analyzing risk, in a thoughtful way, but subsequently realized they were not (Gardner, 2008, p70).

The use of heuristics often leads to judgement bias. The theory predicts that an event perceived as involuntary, new and catastrophic is more likely to be rated riskier than an event perceived as voluntary, old and chronic (Krimsky & Golding, 1992). The psychometric approach has been criticised for failure to account for the context specificity of risk problems (Otway, 1992). The use of 'risk perception' or 'risk' throughout this thesis reflects a wider understanding; risks are not weighed in isolation, but are identified within a socially constructed context.

> In all cases, the concept of risk is bound to an experiencing subject who is vulnerable to harmful events in this or that respect, given these or those circumstances. Risks are neither purely objective events nor purely subjective events; they belong to the objective-relational features of existence. Risks appear in the dangerous zone of contact between physical events and social routines (Gregersen, 2003, p359).

Consequently, risk means different things to different people (Hutter, 2005).

> Risk managers in institutions recognise that perceptions of risk vary among managers, senior management, academics, students and the governing body. For example, the personnel function will have a very different perception of risk to an academic department working in biotechnology research (HEFCE, 2005, p8).

In investigating different perceptions of risk, many studies focus on public response to hazards such as cancer, BSE and engineering failures (Gigerenzer, 2003; Rothstein, 2002; Pate-Cornell, 1996). The topics in the July 2009 issue of the journal *Risk Analysis* included food security, influenza infection, chloroprene carcinogenicity, terrorism, location of nuclear-related facilities, and accidents and unpleasant incidents, illustrating a focus on risk as hazard. Adams (1995) suggests that defining risk as a way to deal with physical hazards creates unnecessary misunderstanding, especially given the common usage of 'risk' and 'hazard' as synonyms. The reductionist approach of equating outcomes with physical harm neglects the multitude of negative outcomes that people associate with risks (Renn, 1998).

A systematic classification of risk perspectives (Table 2.1) identifies seven approaches to risk management, dependent on academic discipline (Renn, 1992).

<table>
<tr><td></td><td colspan="7">Integrated approaches: e.g.: Social Amplification of Risk, ERM</td></tr>
<tr><td></td><td>Actuarial</td><td>Toxicology/ Epidemiology</td><td>Probabilistic</td><td>Economics</td><td>Psychology</td><td>Social</td><td>Cultural</td></tr>
<tr><td>Base Unit</td><td>Expected Value</td><td>Modelled Value</td><td>Synthesised expected value</td><td>Expected utility</td><td>Subjectively Expected</td><td>Fairness/ competence</td><td>Shared values</td></tr>
<tr><td rowspan="2">Predominant Method</td><td rowspan="2">Extrapolation</td><td>Experiments</td><td rowspan="2">Event & Fault Tree Analysis</td><td rowspan="2">Risk-benefit analysis</td><td rowspan="2">Psycho-metrics</td><td>Surveys</td><td rowspan="2">Grid-Group analysis</td></tr>
<tr><td>Health surveys</td><td>Structured analysis</td></tr>
<tr><td>Scope of risk concept</td><td>Universal</td><td>Health & Environment</td><td>Safety</td><td>Universal</td><td>Individual perceptions</td><td>Social interests</td><td>Cultural clusters</td></tr>
<tr><td rowspan="2">Basic problem areas</td><td colspan="4">One-dimensional</td><td colspan="3">Multi-dimensional</td></tr>
<tr><td>Predictive power</td><td>Transfer to humans</td><td>Common mode failure</td><td>Common denominator</td><td>Social relevance</td><td>Complexity</td><td>Empirical validity</td></tr>
<tr><td></td><td colspan="3">Averaging over space, time, context</td><td colspan="2">Preference aggregation</td><td colspan="2">Social relativism</td></tr>
<tr><td rowspan="3">Major applications</td><td rowspan="3">Insurance</td><td>Health</td><td rowspan="3">Safety engineering</td><td rowspan="3">Decision making</td><td colspan="3">Policy making & regulation</td></tr>
<tr><td>Environmental protection</td><td colspan="3">Conflict resolution (mediation)</td></tr>
<tr><td colspan="3">Risk communication</td></tr>
<tr><td rowspan="2">Instrumental Function</td><td rowspan="2">Risk sharing</td><td colspan="2">Early warning</td><td rowspan="2">Resource allocation</td><td rowspan="2">Individual assessment</td><td>Equity Fairness</td><td rowspan="2">Cultural identity</td></tr>
<tr><td>Standard setting</td><td>Improving systems</td><td>Political acceptance</td></tr>
<tr><td>Social function</td><td colspan="7">Assessment — Risk reduction & Policy selection (Coping with uncertainty) — Political Legitimisation</td></tr>
</table>

Table 2.1 Systematic Classification of Risk Perceptions
Source: Renn (1992, Figure 3.1)

Technical analyses within these perspectives are linked to the narrow definition of undesirable effects, confining possibilities to numerical probabilities. The need for integration of both social and physical factors in risk studies is advocated.

> As with most extreme positions, the positivistic view of risk and the social constructivist view are poor descriptions of reality (Renn, 1992, p54).

Hacking (1999) illustrates how many ideas are not based on fact but social construction (eg: classifications such as dolomite and child abuse), but queries the value of stating things are socially constructed. However, he suggests it may be relevant when the types are interactive ie: being aware of being categorised as 'abused' may affect subsequent perceptions of self and behaviour. Rocks so classified remain unaffected. In this study, the emphasis is on aspects of operational risk linked to organisational aims (themselves a social construction) to which interactive and reflexive responses are expected.

The University performs some quantitative assessment of risks (e.g., chemical exposure). The research does not plan to analyse the accuracy of such calculations. The emphasis on qualitative contribution to the assessment process recognises that reliable data is often not available in relation to identified risks.

> Risks are culturally constructed not because people prefer make-believe to facts, but because, at the point of decision, insufficient 'facts' are available (Adams, 1995, p194).

The recent emphasis on controlling risk within organisations reflects the distinction between risk and danger drawn by Luhmann (1990a, 2005) in which risk is understood as future damage that is linked to decisions (i.e. internal to an organisation or individual); danger is attributed to factors over which we have no influence. Newspaper accounts reveal that organisations, and society more generally, link risks to decision-making (e.g., Northern Rock *(*2007); Icelandic Banks (2008); Lehmann Brothers (2008); CAA unprepared for volcanic ash cloud (2010); Goldman Sachs fraud charges (2010); BP oil spill (2010); RBS fined £5.6m for breaches in risk controls (2010). Risk, as opposed to danger, implies a form of management oriented towards decision-making (Luhmann, 1996; Power, 1997).

This notion links to the idea that risks originate in the social organisation of knowledge and norms rather than in nature itself (Beck, 1992; Giddens, 1998). An awareness of the impact of organisational decisions on society is reflected in the emergence of operational risk management. Such a conception aims to reduce risks to organisations themselves, and consequently, to society.

> Risk may be defined as a systematic way of dealing with hazards and insecurities induced and introduced by modernisation itself (Beck 1992, p21).

This view does not recognise the reduction of risks that also accompanies technological advancement. Historical evidence indicates a positive correlation between the advance of science and technology and increases in longevity and material well-being (Adams, 1995). It also raises the question of when modernisation commenced.

In contrast, some authors focussing on organisations consider risk in a positive light. Anderson (1999) believes the traditional view of risk, that it is bad and something to be avoided is fast becoming outmoded. A single definition of risk remains elusive, but for this study, with its emphasis on HEFCE governance, the regulatory description of risk is most relevant.

> The threat or possibility that an action or event will adversely or beneficially affect an organisation's ability to achieve its objectives (HEFCE, 01/028, p5).

This conception of risk as a social construct has serious implications for the calculability of risk outcomes. The risk management process needs to take account of anything that helps or hinders achievement of aims.

The analysis of risk has its origin in probability theory in which the uncertainty of outcome is incorporated. It is instructive to recognise the properties of risk and uncertainty as distinctive categories. Most importantly, uncertainty is a concept in its own right (Froud, 2003).

> By 'uncertain knowledge', let me explain. I do not merely mean to distinguish what is known for certain from what is only probable. The game of roulette is not subject, in this sense, to uncertainty; nor is the prospect of a Victory bond being drawn. Or, again, the expectation of life is only slightly uncertain. Even the weather is only moderately uncertain. The sense in which I am using the term is that in which the prospect of a European war is uncertain, or the price of copper or the rate of interest twenty years hence, or the obsolescence of a new invention, […]. About these matters there is no scientific basis on which to form any calculable probability whatever. We simply do not know (Keynes, 1973, p213–4).

Uncertainty exists when the consequences of decisions only emerge in a distant future. Dynamic society undermines calculability in the long term, regardless of what is known now (Froud, 2003) since the future is a complex product of multiple decisions.

> The scientific approach to risk—the Royal Society approach to risk—assumes that uncertainty is a problem that can be cracked by science (Adams, 1995, p195).

Predicting the future using historical data or events has an inherent weakness if causal factors are not understood, as illustrated by the example of chickens fed daily by someone who ultimately wrings their neck (Russell, 1912). Skilled mathematicians are unable to predict future events. Taleb (2007) provides an example that illustrates the problem well: Robert Merton Jr, and Myron Scholes[3] founded a large speculative trading firm called Long-Term Capital Management; a collection of people from the highest ranks of academia whose ideas of portfolio theory inspired their risk management of possible outcomes on an industrial scale. Then, during the summer of 1998, a combination of large events, triggered by the Russian financial crisis, took place that lay outside their models. The firm went bust and almost took down the entire financial system with it, as the exposures were massive. Although it is clear with hindsight that the distribution of data they used for analysis was not known, their models ruled out the possibility of large deviations, and they allowed themselves to take an enormous amount of risk, while believing it to be small. MBAs in business schools still learn portfolio theory, and the option formula went on bearing the name Black-Scholes-Merton (Taleb, 2007).

A further complication for prediction arises from our need to make sense of the world. Compression of information is vital and ability to remember requires information to be arranged and summarised. As simplification occurs more order is put in and the world appears less random than it is. Stories are easier to remember than statistics.

> We will tend to more easily remember those facts from our past that fit a narrative, while we tend to neglect others that do not *appear* to play a causal role in that narrative (Taleb, 2007, p70).

Furthermore, conflict among divergent interests with alternative explanations of unreliable assessment calculations form another source of uncertainty (Grandori, 1984). McGrew &Wilson (1982) identify some potential adverse effects in the management of uncertainty, such as the game of risk avoidance, the incentive to do nothing, allocation of risk responsibility to others (who may not have

[3] Jointly awarded The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel in 1997

authority) and the invention of false risks. Furthermore, they suggest that in a highly uncertain environment, organisations invent complex means to share responsibility among many members, reducing the possibility of blaming any individual for errors. In this context, it is interesting that risk management 'best practice' encourages the widespread involvement of staff.

Availability of information is also a source of uncertainty within an organisation, defined as:

> The difference between the amounts of information required to perform the task and the amount of information already possessed by the organisation (Galbraith, 1977, p283).

Uncertainty associated with lack of information, and uncertainty as described by Keynes, differ in the sense that an organisation has greater control over the former (Berry et al, 2005). In addition, the aims of an activity, the expected outcomes and the means or how to achieve an aim, may lack clarity (Henry & Walker, 1991). Uncertainty is not simply a lack of sufficient or pertinent information; it is also difficult to interpret too much data, including proliferation of policies, procedures and control requirements. Ellis & Shpielberg (2003) found that information gathering increases uncertainty when information elaboration mechanisms are not used, and they suggest that information overload increases the risk of being unable to comprehend and use it effectively in a decision, e.g., a risk register listing 539 risks. The possibility of reducing some forms of uncertainty, for example, by production or collection of data to support disclosure requirements can mask the inherent uncertainty underlying such outputs.

This section has shown that the historical shift from statistical calculation of probabilities towards socially constructed notions of risk centred on organisational aims is problematic in relation to risk assessment outputs. Since uncertainty underlies attempts to measure risks to organisations and defies mathematical analysis, there is little choice but to include less quantified approaches in assessing operational risk. The following section goes on to use

examples from the HEFCE (2001) guidance to illustrate features of the assessment process itself.

2.4 Assessing Risk

This section provides an important critical evaluation of the risk assessment process, which forms a key part of risk management models. It formed the focus for this study because identification and assessment of risk were expected to reveal detailed interpretations of risk management and control more generally. Furthermore, since the normative model includes formal risk assessment it is important to understand this stage in the risk management process. A problem with one stage of a process impacts on overall process effectiveness (Slack et al, 2009). All risk assessments aim to estimate severity and likelihood of risks occurring in order to make comparisons with (usually pre-defined) acceptability criteria. The following figure illustrates a 'traffic light' indicator of acceptability from the HEFCE guidance.

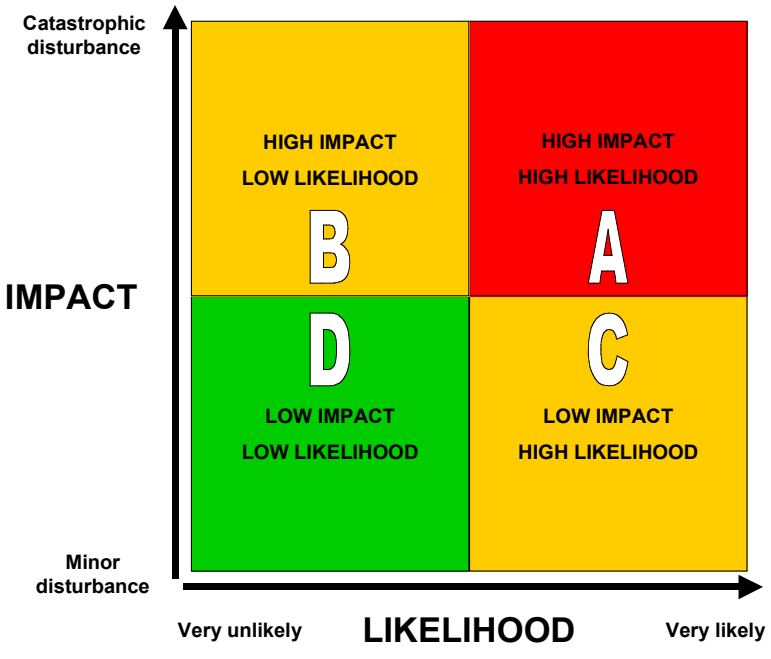


Figure 2.1 Assessment Rating Grid
(HEFCE, 2001, p19, Figure 5)

The guidance suggests mitigation of risks rated in the 'A' category. Models for risk assessment range from quantitative (calculation of meaningful numbers), to semi-quantitative (some use of numbers integrates with value judgements, for example, about the efficacy of administrative control systems). At the other end of the spectrum lies qualitative assessment in which words such as 'rare' or 'likely' are used to describe the likelihood, and severity is classed in a range from 'insignificant' to 'catastrophic'. This process underlying formal risk management models is an essential step towards prioritising the vast array of potential risks.

> Whatever scale is chosen, it must be relevant to the institution, be easily understood and provide a common formula for participants to assess the risks. It is a guide, and as such does not have to be an exact science (HEFCE, 2001, p20).

The combination of frequency and severity provides a risk rating or score, and the HEFCE requirement of a 'formula' for assessment implies a calculative approach, but paradoxically they stress that accuracy is not important. There is a general lack of agreement about the design of risk assessment processes.

> There is no commonly accepted definition of risk either among or between the professional and academic groups developing and using risk assessment, and there is no internationally agreed upon procedural standard defining steps of the risk assessment tool (Cowell et al, 2002, p879).

The literature suggests that qualitative aspects of assessment are difficult to understand and predict, thus quantitative models are preferred where possible (Krimsky & Golding, 1992). However, many weaknesses and difficulties are identified in relation to quantitative risk assessment itself.

> There is much empirical evidence of the lack of 'scientific objectivity' in risk assessment illustrated by a number of contrasting findings about the carcinogenicity or toxicology of chemicals in Britain and the United States (Horlick-Jones, 1998, p81).

Estimating low-probability events is acknowledged difficult when calculations are possible, and Kunreuther et al (1984) suggest that there is no practical basis for precisely estimating the statistical chance and consequences of the occurrence of certain types of accident. However, HEFCE guidance disagrees

about the difficulty of predicting frequency and states 'assessing the likelihood of a risk occurring tends to be more straightforward' (HEFCE, 2001, p20).

The National Research Council Governing Board Committee on the Assessment of Risk highlights one way in which quantitative assessments present a source of risk.

> While quantitative risk assessment facilitates comparison, such comparison may be illusory or misleading if the use of precise numbers is unjustified (NRC, 1981, p15).

Even for physical threats, most risk analysts recognize that risk estimation involves uncertainties and subjective judgements and that two risk analysts may therefore produce widely differing assessments of the same hazard (Kunreuther et al, 1984). The defining characteristic of measurement in comparison to guessing or judging is that the former should not depend on who is doing it and is in principle replicable (Power, 2004b). Consequently, most risk estimates are not true measurements. Otway (1992) considers it is only possible to 'measure' relatively uninteresting risks for which there are statistical or epidemiological data, and suggests that the risk assessment process is useful, not for risk estimates generated, but for what is learnt about the system from the process.

The emphasis on quantitative assessment requires a tacit assumption that risks can be treated as concrete physical entities that can be precisely defined and unambiguously measured in objective terms (Hood & Jones, 1996). The ontology of risk indicates a fundamental problem with this premise, especially in the light of socially constructed aims and objectives as a focus for the HEFCE risk definition. The recognition that not all risk are amenable to calculative models to produce probabilities or to estimate Value at Risk (VAR) provides the foundation for a critique of the application of a technical approach to operational risk management (Froud, 2003). Refining scientific tools is unlikely to address this problem (Funtowicz & Ravetz, 1992).

In situations of uncertainty, quantitative methods are inappropriate, and risk assessment has little alternative but to include qualitative factors. Consequently, the consistency of the numerical values relating to particular risks is not the sole interest; variability in the selection of the types of risks to be assessed is likely, since there are multiple aims within an organisation (Hutter, 2005). Empirical support for this suggestion is evident in a recent case study of two UK banks.

> Many organizational actors consider risk to belong to realms beyond computation, and mobilize risk controls to serve other ends such as learning and 'ammunition' to capital allocation debates (Mikes, 2009, p21).

This situation can result in competition and conflict between different groups in an organisation. While the risk assessment process identifies the need for mitigating actions to reduce risk to 'acceptable' levels, these cannot be precisely defined to suit all perspectives. Even in relation to physical hazards, acceptable levels of risk can never be answered just by explaining how nature and technology interact (Adams, 1995). What needs to be explained is how people agree to ignore most of the potential risks that surround them and interact to concentrate only on selected aspects (Douglas & Wildavsky, 1982). The question of what constitutes acceptable or tolerable risk to members of an organisation and how this translates into risk management activity is fundamental to understanding the basis on which risk decisions are made (Hutter & Power, 2005; Mikes, 2009). For organisations, risk acceptability is influenced by how external groups interpret outputs and the risk assessment process may be designed with stakeholders in mind (Hood et al, 2001).

> One important consideration in designing a risk management process is whether it will provide sufficient evidence to enable governors to support any disclosure statements they wish to make to reassure external stakeholders (HEFCE, 2001, p5).

Consequently, organisations reassure outside audiences about risk concerns through disclosure documents, and Clarke (1999) conceives of such paperwork as fantasy documents that help organisations translate uncertainty into acceptable risk.

In other contexts, Adams (1995) illustrates that degree of control has a significant influence on the risks people are prepared to accept, and are iterative such that increased perceptions of control, such as seat-belts in cars, can result in less cautious driving behaviour and increased deaths. Reactions to risk depend on the degree to which it is voluntary (scuba diving and other dangerous sports); unavoidable (public transport) or imposed (air quality, proximity of a nuclear power station); the degree to which we feel in control (driving) or at the mercy of others (plane travel); and the degree to which the source of possible danger is benign (doctor's orders); indifferent (nature) or malign (murder and terrorism) (Bjerkle, 2006, citing Adams). Within organisations, degree of control draws authority and power into the formulation of risk perceptions since a lack of control serves to reduce tolerance to risk.

> Judgements about risks are very powerfully influenced by whether they are seen as voluntary or imposed (Adams & Thompson, 2002).

Risk rating and risk tolerability are not the only factors to weigh in the assessment. A decision to act on a risk problem depends less on the magnitude of the risk than on the organisational possibility of acting (Otway, 1992), emphasising that risk management activities require authority and power within the organisation. In addition, the desire for uncertainty reduction is an influence on risk management outcomes (Bernstein, 1996a, Bradac, 2001), suggesting a preference for managing those risks that can be addressed easily.

The search for possible risk mitigation actions is likely to cease when an acceptable solution is found, not necessarily the best solution, described as 'satisficing' (Simon, 1997a). In the case of operational risk management, assessment considers whether the rating been brought within acceptable limits, not whether the rating is the lowest achievable. This contrasts with traditional safety risk assessments that aim to reduce risk to a level that is ‘As Low As Reasonably Practicable’ (ALARP) (Health & Safety at Work Act, 1974). The risk ratings and risk acceptability criteria produce an expression of acceptable risk for the organisation, often termed ‘risk appetite’, against which risk ratings are measured.

> The very idea of risk 'appetite', which is at the heart of risk management practice, is closely bound up with the neoliberal postulation of organizations as 'enterprising' selves. Whereas a longstanding public sector tradition in health and safety has operated with the notion of risk 'tolerance', the category of 'risk appetite' has a less precautionary connotation and is aligned with that of the enterprising actor (Power, 2009, p2).

While qualitative understandings of risk appetite are possible (COSO, 2004), the dominant conception is that of a quantitative benchmark such as maintaining a target level of financial capital (Power, 2009). Within the HE sector the concept of risk appetite is under-developed and is not always clearly defined by institutions (HEFCE, 2005). The conception of 'appetite' as a singular input into risk management models reflects the control system conception of risk management. However, a model of institutionalized conflict between different 'appetites' is possible (Hood & Jones, 1996).

> …preferences cannot be consistently aggregated and it is clear that organizations, as much as societies, are constituted by varieties of risk appetites which change over time and according to context (Power, 2009, p3).

The organisation needs to assess and balance dynamic and evolving interpretations of operational risk. This section has outlined the key elements of the risk assessment process. This study specifically chose to focus on these assessment activities, rather than risk management as a whole. However, in the organisational context, management control systems influence risk identification, thus the broader aspects of risk management warrant discussion in the following section.

2.5 Managing Risk

This section will examine features of risk management that interact with risk interpretation to produce assessment outputs. Reflecting the lack of an agreed definition of risk, interpretations of risk management also vary.

> The current trend toward integrated or 'holistic' risk management has not yet led to convergence or integration of the terms, concepts and models applied to the management of risk (Shimpi, 2001, p11).

The conception of risk as failure to achieve corporate aims (HEFCE, 2001) suggests organisations already manage many such risks and the risk management framework contributes to existing strategic control mechanisms. Simons (1994) suggests that resting on the foundation of internal control systems there are four 'Levers of Control' to drive business strategy. Firstly, belief systems, which define basic values, purpose and direction to guide opportunity seeking; secondly, boundary systems, formally sanctioned rules and credible threat of punishment; thirdly, diagnostics control systems, monitoring organisational outcomes compared to preset standards of performance; and lastly, interactive control systems, which support decision-making of subordinates. Studying the implementation of HEFCE governance, a strategic aim of the case study organisation, provides a window onto the operation of these levers.

Some difficulties have been acknowledged in obtaining the buy-in of academic staff to the benefits of explicit risk management, particularly if the process is owned by a central administrative function (HEFCE, 2005). The academic culture within universities is identified as a possible barrier to success in risk management implementation since many decisions about academic work are decided informally under the skin of established and formal arrangements, defying the reach of managerial control (Dearlove, 1998a).

The involvement of a broad cross-section of staff in the risk management process is recommended (HEFCE, 2001), and the point is made that both non-academic and academic staff have already been carrying out risk management without necessarily knowing it and may be more willing to be involved if they are made aware of this through training (HEFCE, 2005). Many existing control systems perform a 'risk management' role.

> The management of risk is not a linear process; rather it is the balancing of a number of interwoven elements which interact with each other and which have to be in balance with each other if risk management is to be effective (Treasury, 2004, p13).

Organisations deal with complexity via differentiated structures and procedures and consequently create sub-goals (Berry et al, 2005), providing a mechanism

for multiple and conflicting aims (Perrow, 1970; Mikes, 2004). For the organisation as a whole, this can result in gaps in control systems with some risks being ignored by all, since they are seen to fall outside the job description, or operational umbrella of the group (Power, 2004a). Krimsky (1992) takes the view that group and social context play the primary role in the selection and response to risk, suggesting that common viewpoints develop within sub-groups in an organisation. The question arises as to whether role influences the way in which risk management is practiced, aims are balanced and control systems are implemented.

A role is not a system of prescribed behaviours but a system of prescribed decision premises. Roles tell organisation members how to reason about the problems and decisions that face them: where to look for appropriate and legitimate informational premises and goal (evaluative) premises, and what techniques to use in processing these premises (Simon, 1991).

Studying the dynamics of risk management includes the interactions between risk and other management controls (Mikes, 2009). Assessment ratings are recommended to reflect net risk by taking account of such management controls (HEFCE, 2001). HEFCE define control or mitigating action as:

> … an action taken to reduce the likelihood of a risk occurring, or to limit its adverse consequences (HEFCE, 2001, p6).

The underlying implication of the net risk approach is an organisational ability to assess and rate management control effectiveness. There is variable understanding in the HE sector of the concepts of gross and net risk and some institutions were unclear as to what their ratings actually showed (HEFCE, 2005). Furthermore, it is interesting to note the asymmetry between the HEFCE definition of risk, stating possible positive and negative outcomes in relation to objectives, whereas the control or mitigating actions definition only reflects reduction of unwanted events, a more negative interpretation of risk. This emphasis pushes the meaning of risk in the direction of a pessimistic notion of avoidance of unwanted events. Consequently, the search for opportunities is not encouraged; the least risky approach may be to do nothing.

The impact of the effectiveness of internal controls introduces an additional measurement challenge, in requiring organisations to assess dynamic and interrelated processes. Variability in risk identification also prevents the calculation of a 'risk appetite' that is appropriate to all organisation members, making acceptable risk difficult to establish.

This section has illustrated the problematic nature of risk management, and points to some potential flaws in the model that the research questions have been designed to investigate. The following section will describe the nature of governance reforms in the private sector, from which the HEFCE guidance derives.

2.6 Private Sector Governance Reforms

This section will review the emphasis of corporate governance on control of risks. In the wake of several major financial scandals, such as Enron, the Maxwell group and Barings Bank, private sector[4] financial governance was amended to include risk management. In the UK, the formalisation of requirements for risk management activities for companies publicly listed on the stock exchange began with the Cadbury Code (1992), and culminated in the Combined Code on Corporate Governance (Financial Reporting Council, 2003) requiring a framework of 'prudent and effective' controls enabling risk to be assessed and managed. The code recommends that 'non-executive directors'[5] scrutinise the performance of management in meeting agreed objectives and monitor performance reports to satisfy themselves on the integrity of financial information and control and that systems of risk management are robust and defensible.

[4] Those organisations that are not owned or funded by government, including non-profit organisations, make up the private sector.
[5] A 'non-executive director' has no responsibility for the day-to-day operations of the organisation

The reports from the Treadway Commission (COSO, 2004) and the Turnbull Committee (ICAEW, 1999), advocate Enterprise Risk Management (ERM) as a framework for capturing risks that are material from the point of view of the achievement of the strategic objectives of the enterprise (Mikes, 2009). The key principles of the Turnbull guidance (1999) have been adopted by HEFCE and are discussed in depth in the following section (see Table 2.3).

The recommended 'best practice' model utilises the ERM approach to holistic management of risk in organisations and introduces various institutional routines and decision aids to assess and control elements that can affect the survival, reputation, or shareholder value of an enterprise (Hood et al, 2001). It is a structured and disciplined approach to aligning strategy, processes, people, technology and knowledge in evaluating and managing the uncertainties that an organisation faces (Berry et al, 2005). This perspective acknowledges the attempt to control uncertainty, not risk. Despite best practice claims, the implementation of ERM in the private sector has not been entirely successful. In a survey of corporate practices only 11% of companies claim to have fully implemented comprehensive ERM programs (Gates, 2006). Another study (Deloitte, 2007) suggests that questions remain about the right organisational level of analysis (at enterprise level or different business unit levels). A survey by Deloitte states that:

> For all the hype, however, ERM continues to be an elaborate concept that varies widely in definition and implementation, and reaching full maturity may take several years (Deloitte, 2004, p17).

Consequently, although measuring operational risk in absolute terms is desirable, it remains 'work in progress' within the private sector. Mikes (2005) suggests that ERM remains an elusive and under-specified concept and quantifying operational risks, which are largely dependent on unpredictable human responses, is difficult and may lack benefit.

The Turnbull Guidance (ICAEW, 1999) has had a significant influence on 'best practice' contained in risk management models in both the private and public sector. In 2004, a review of the guidance strongly endorsed retention of the

flexible, principles-based approach of the original guidance and made only a small number of changes (FRC, 2005). The guidance outlines to directors appropriate internal controls to meet the requirements of the Combined Code (FRC, 2003) for listed companies. However, its influence has been more far-reaching, and it is recommended in the UK public sector generally (Treasury, 2004; HEFCE, 2001).

> A company's system of internal control has a key role in the management of risks that are significant to the fulfilment of its business objectives. A sound system of internal control contributes to safeguarding the shareholders' investment and the company's assets (FRC, 2005, p3)

The guidance requires an annual review of control system effectiveness, but does not elaborate on methods to use. Evaluating control systems is fundamentally difficult because they are not static systems, but dynamic, self-controlling systems (Otley, 2003), their effectiveness is consequently difficult to measure and there is little guidance on defined scales or targets against which to assess. Perrow (1986) considers that organisations implement three different types of controls, illustrating varying degrees of accessibility to audit and measurement. Direct controls are fully obtrusive ones, such as giving orders, direct surveillance, and rules and regulations (which are considered expensive and reactive). Bureaucratic controls are embodied in specialisation, standardisation, and hierarchy, which are unobtrusive by comparison (and viewed as more efficient). Fully unobtrusive controls are instituted by influencing the cognitive premises underlying action (a method that is even more efficient, but difficult to achieve). Most organisations can readily identify direct and bureaucratic controls. However, unobtrusive controls require in-depth case analysis to gain insight into the ways that such control mechanisms operate. In addition, for management control to function effectively, communication is necessary to ensure that organisation members are kept informed of policies, procedures and objectives to which they are expected to conform (Drury, 2005). Although policies and procedures may have been issued for a variety of processes, it remains unclear whether anyone knows about them without detailed investigation.

A particularly striking feature of the governance reforms relating to listed companies, is that they penalise inattention and incompetence just as much as deliberate malfeasance (Crouhy et al, 2006), consequently internal processes for demonstrating due diligence are required.

> All parties to discussion in the USA, UK and elsewhere agree that something known as 'box-ticking' is to blame for an excessively rules-based approach to regulation and compliance. This popularized critique targets a rigid, mechanical practice involving the use of needlessly detailed 'standardized checklists' and pursued without regards to weighing costs against benefits. Yet, for all the stridency of these ubiquitous criticisms, and their near unanimous acceptance by both regulator and regulated, there is a striking and puzzling fact to explain: 'box-ticking' as a finely grained process in some broad sense persists, with at best only incremental diminution (Power, 2007, p152).

The quality of outputs generated by a checklist approach to compliance has been questioned.

> Risk reporting in corporate accounts is generally poor. In Turnbull compliant companies information comes from the internal audit function and thus has a limited focus on what constitutes risk to an organisation. External risk and cultural risk tend to be omitted, yet these risks are important to investors and other stakeholders (CIMA, 2007, p29).

Procedural alibis provide a form of bureaucratic insurance against increasing transparency requirements, described as 'blame prevention engineering' (Hood et al, 2001).

The control system needs to be able to synthesise views from differing perspectives. While there are multiple possibilities for ERM practice in organisations, there is a suggestion of conformity of approach; certain common features are evident, such as risk policy, rating grids[6] and risk registers. Similar structural features are expected in ERM implementation regardless of wide-ranging differences in organisational context, particularly in relation to accountability, responsibility and transparency demands, while at the detailed implementation level, risks and risk assessment will vary considerably.

[6] Developed originally for use in assessing physical hazards, the model does not include a positive scale; hazards are potential negative outcomes, they do not include opportunity.

This section has traced the development of private sector governance reforms and their influence on risk management implementation and practice. The recommended ERM model, adopted in both the public and private sector, is discussed in detail in section 2.8.3. The following section examines the interaction between transparency demands and the identification of risk.

2.7 Transparency, Accountability & Risk

This section will explore the association between blame and risk identification within organisations. Bureaucratic transparency includes various processes through which officeholders are watched by experts or agents such as auditors, regulators or tutelary bureaucracies of various kinds (Hood, 2007).

> Transparency has unintended effects such that the making visible starts to change that which is rendered transparent (Roberts, 2009, p2).

The growth of risk management from the mid-1990s onwards (in law, business, banking, education, social work, medical practice, etc.) was less about managing risk as it is formally understood and more about creating auditable representations of due process (Power, 2009). Monitoring and measurement are not new developments.

> Accountability directed toward controlling human performance through quantification and written assessments first emerged in education around the beginning of the 17th century (Espeland & Sauder, 2007, p5).

However, recent demands for oversight of internal processes produce a particular type of transparency, some distance from notions of access to information and the use of statistics, such as infant mortality rates, to enable social action. Risk management encompasses reactivity, such that demands for transparency change organisational behaviour in relation to disclosure requirements. Roberts (2009) illustrates that the popularity of transparency as a method of control has stimulated many criticisms:

> As Strathern [2000[7]] has observed, what is odd about our embrace of transparency is that 'everyone knows' about its inadequacies: that

[7] Dates in square brackets ([]) have been added to this quote from Roberts (2009) using references in the paper's bibliography

> transparency involves a simplistic abstraction and de-contextualisation from the complexity of the world (Strathern), that it undermines trust as it seeks to create it (Tsoukas [1997]), encourages deception as it seeks to make possible a complete visibility (O'Neill [2006]), promotes blame avoidance (Hood [2007]), and transforms organisational purpose into the mere management of performance indicators (Power [1997, 2007]). (Roberts, 2009, p12).

In organisations, transparency is linked to accountability for satisfying the demands of external oversight, associated with potential for blame, therefore a risk. Organisations cannot eliminate all risks, so they must defend risk decisions and produce visible signs of conformance. Responsibility for risk management interacts with capability to mitigate and the potential for blame:

> … responsibility should be defined as discursively constituted by claims, accounts or attributions of duty, accountability and capability. We define *capability* as the means to do the task in terms of authority, resources, and access. We define *accountability* as the potential to be blamed for not doing the task properly (Sillince & Mueller, 2007).

Accountability implies both implicitly and explicitly the notion of answerability and so is inextricably linked to questions of power, control and authority (Perry & McWilliam, 2007). The literature reviewed in this section suggests that where authority is lacking, capability and risk tolerance are reduced, responsibility is undermined and a protective shield against accountability and blame is established through procedural conformance. The following section explores how changes to the regulatory context in HE have placed increasing emphasis on transparency and the control of risk.

2.8 The Regulatory Context in Universities

This section will illustrate the background to risk management implementation and includes the transition to New Public Management (NPM) and enforced self-regulation with the use of targets and measures, which can be associated with accountability and the potential for blame outlined previously. It goes on to examine in depth the recommended ERM model that forms the basis of the implementation being studied here.

2.8.1 New Public Management

This section outlines the context for the introduction of risk management practices in HE, at a time of the lessening of differences between the public and private sector, with emphasis shifting from accountability for process to accountability in terms of results (Hood, 1995). In organisational analysis, it is important to understand the context in which institutions operate (Burns & Stalker, 1961; Pugh, 1973). A brief historical review of the HE sector provides the background for these changes. In the period from 1962 to 1995, as the number of HE students rose five-fold to 1.7 million, public expenditure increased from £219 million to around £6.5 billion (Dearlove, 1998a). The increased number of students attending HE required changes to the distribution of funds. This trend has continued, the total HEFCE grant in 2008/09 was £7.073bn and the number of full-time students accepted on to undergraduate courses rose from 390,890 in 2006 to 413,430 in 2007 (Department for Business Innovation & Skills, Press Release, 2008). The financial burden of the move from teaching a small elite at universities to mass education, essential to fulfilling societal goals, could not be sustained.

> Our aim is to promote and provide the opportunity of successful participation in higher education to everyone who can benefit from it. This is vital for social justice and economic competitiveness (HEFCE web site 7/2/7).

In England, until the 1980s, the regulatory model was that of state-backed professional autonomy, where the major driver of the institutional framework of rules and incentives was the tradition of collegial governance and academic autonomy (Dearlove, 1998a). Rather than government actions and market forces, the assurance of academic standards relied on use of professional values, as found, for example, in the external examining system (King, 2006). Reduced funding per head in the 1980s required university management to focus on organising efficiently and doing more with less, and the announcement of changes to university funding in 2010, can be expected to continue this trend. In the

1990s, issues of governance, accountability and openness come to the fore, accompanied by a transition to 'managerialism'.

> Managerialism in universities refers to a process that has involved a power shift away from a bottom heavy, consensual, collegial democracy of rough professional equals towards a keener assertion of top down authority by the vice-chancellor and the senior management team of academic managers and full-time administrators (Dearlove, 1998b, p68).

Alongside the emphasis on management control, the shift in regulatory approach introduces elements of competition and a market for services, and the adoption of 'best practice' guidance developed for use within the private sector. The administrative changes in the management of public institutions has involved:

> A shift of concern from policy to management, emphasizing quantifiable performance measurement and investment appraisal; the break up of traditional bureaucratic structures into quasi-autonomous units, dealing with one another on a user-pays basis; market testing and competitive tendering instead of in-house provision; a strong emphasis on cost-cutting; output targets rather than input controls; limited term contracts instead of career tenure; monetized incentives instead of fixed salaries; 'freedom to manage' instead of central personnel control; more use of public relations and advertising and the encouragement of self-regulation instead of legislation (Dunsire, 1999, p373).

In the University context, an important aspect of NPM is the Private Finance Initiative (PFI), extending the role of the private sector in the provision of what are generally considered public services (such as health, education, transport infrastructure, prisons and the administration of the functions of the state). Universities sign contracts with private sector partners to design, finance, build and manage assets and to deliver associated services (Froud, 2003); Public/Private Partnership (PPP) is encouraged. The Department of Health outline the arrangement:

> Private consortia, usually involving large construction firms, are contracted to design, build, and in some cases manage new projects. Contracts typically last for 30 years, during which time the building is leased by a public authority (Department of Health website, Nov 2007).

Contracts have become a familiar part of NPM, and are evident in the PFI arrangements at the University. Froud (2003) suggests that contracts assert and imply new relations and a control over the unfolding future, as well as signifying a new kind of management. Contracts specify a series of outputs that private sector providers must make available, outlining a division of responsibilities, management and authority; potential risks are transferred between parties. Such partnership arrangements provide a convenient property of spreading the blame when things go wrong, contributing to their current popularity in public management (Hood, 2007). Criticisms in the press (and Froud, 2003) suggest that, as with any form of hire purchase, buying a product over a long period is more expensive than buying it with cash up front, especially since governments can borrow cash at a cheaper rate than the private sector. In addition, there is a question about how much risk is genuinely transferred to the private sector given the government's record of bailing out private companies managing troubled public services (Guardian, 15/1/03). PFI aligns with UK Government policy both in its focus on risk management and in its emphasis on private sector practices within the public sector.

There are both critics and supporters of NPM changes within the HE sector. Some believe that corporate approaches improve institutional decision-making and response time, while others have documented disadvantages including lower morale, interpersonal and organisational conflict and loss of institutional values and integrity (Kesar & Eckel, 2004). Gorz (1989, in Broadbent & Laughlin, 1997) considers that some activities are rightly conducted according to economic reason whilst others, such as education, are not, and should not, be governed by such reasoning. The paper 'Management of Risk, Principles & Concepts' (Treasury, 2004), identified private sector corporate governance as an appropriate agenda for public sector organisations to use in evaluating the risks they face in delivering services (Froud, 2003) and raises the question of the applicability of profit maximisation models to the HE environment.

> The pursuit of risk is the source of profit and the management of risk is concerned with the avoidance of loss (Willman et al, 2006, p1371).

Pursuing risk for increased profit does not ally closely with the ethos of universities, but the achievement of organisational aims involves aligning control systems with strategic objectives, providing a similar focus for risk management models in HE. There is considerable variation in opinion about the impact of NPM on educational establishments.

> Any assessment of NPM will usually depend on the values of the assessor and only partly on hypotheses about causes and effects (Gruening, 2001, p21).

Broadbent & Laughlin (1997) consider that NPM is driven in general by the desire to generate 'good management'. However, they make the point that there has been little empirical evidence to support the view that NPM results in more effective and efficient organisations.

Since organisations have freedom of choice in how to comply with ERM demands to manage risks on an organisation-wide basis, and increasing transparency raises the spectre of individual responsibility, emphasis shifts towards risk (Culpitt, 1999). The external environment in which HE takes place now records risk assessment outcomes on forms, utilising statistical methods in many areas where personal relationships would previously have formed the basis for decisions. This is an example of 'action-at-a-distance' (Foucault, 1979) in which "statistics, it is now argued, serve and sustain the disciplinary surveillance of professionals" (Culpitt, 1999, p56). The expansion of this type of control is evident throughout the public sector, and there are concerns about potential negative outcomes in relation to performance measurement. In the case of the death of 'Baby P', the Director of Children's Services for the borough was described as 'a bureaucrat more concerned with performance ratings and graphs showing progress than the welfare of children' (Guardian, 1/12/08). The Better Regulation Review Group (2004) recognise that measures associated with performance assessment can result in unintended consequences and that the problem is often

overlooked; while a proposal seems rational, they suggest that nevertheless institutions or their staff will respond in a way that is interpreted as irrational.

This section has revealed the need for a more detailed understanding of the interrelationship between targets and the identification of risk. The following section explores the regulatory mechanisms underlying the implementation of risk management 'best practice'.

2.8.2 Regulatory Approach to Risk Governance

This section will examine an important mechanism to encourage implementation of risk governance in HE; the dual role of HEFCE, firstly as a provider of university funding and, additionally, as regulator of HE institutions (activities detailed in Table 2.2).

Funding	Regulation
• Distribute money to universities and colleges for HE teaching, research and related activities • Fund programmes to support the development of HE • Provide money to further education colleges for their HE programmes	• Monitor the financial and managerial health of universities and colleges • Ensure the quality of teaching is assessed • Provide guidance on good practice

Table 2.2 HEFCE Activities
(Source: HEFCE website 'What we do' downloaded 7/2/7)

The introduction of governance through production of guidelines and 'best practice' relies on organisations choosing to implement guidance in preference to enforcement through legal controls, and has been described as 'self-regulation' (Ayres & Braithwaite, 1992). HEFCE risk management governance is embodied in guidance and it is not a requirement for HE establishments to follow this advice. Procedures are

not prescribed[8] and the organisation is free to decide on the processes needed to achieve compliance with targets and guidelines established by the regulator.

> The benefits of risk management vary depending on how it is planned and implemented. A minimalist approach is likely to deliver limited benefits and could well turn into a bureaucratic 'tick box' exercise. Conversely, a wholehearted though misguided approach could waste valuable time and resources, for example by an over-emphasis on data collection. Each institution will need to decide what benefits it would like to derive from its risk management programme and, taking into account good practice, plan its approach accordingly (HEFCE, 2001, p6).

Despite a lack of evidence in relation to risk management practices and claimed improvements, universities are encouraged to self-regulate and implement good practice guides, driven by the threat that it will be too late to catch up with competitors once the benefits are evident. A review of HE risk governance implementation found that institutions are moving from achieving technical compliance with the Turnbull Report (ICAEW, 1999) and with HEFCE recommendations (2001), and are now looking to realise the benefits of having implemented risk management, including the ability to take better-informed decisions about opportunities, and to constructively address new patterns of risk (HEFCE, 2005).

In addition, the funding role of HEFCE maintains the threat of financial sanctions for non-compliant organisations. Self-regulation is considered 'enforced' when funding is linked to compliance. Enforced self-regulation is one way in which public policy can effectively delegate government regulation, representing a middle path between self-regulation and command and control government (Ayres & Braithwaite, 1992). There is an increasing use of this style of governance within the public sector in both education and the National Health Service (Hood et al, 2001; Baldwin & Cave, 1999; Broadbent & Laughlin, 2002).

[8] The term risk register is not mentioned in the HEFCE 2001 guidance. Their production has been a common compliance response (HEFCE, 2005).

Regulated organisations must take account of regulatory guidance to ensure access to funding.

> To maintain support from important suppliers of resources, organisations constrain their actions to comply with the request of those with resource control (Pfeffer & Salancik, 1978, p139).

In this study, such a request is evident in the risk management guidance recommended by HEFCE. In addition, some parts of an organisation interact more frequently with external groups than others, and are reliant on them for access to funds. In the case study University, the focus here, Medical Schools have a close relationship with the NHS, and need to take account of their governance and aims, while other groups do not. Enforced self-regulation is a response to the administrative difficulties and reduction of innovation that can result from imposing detailed government regulations on organisations (Ayres & Braithwaite, 1992).

> Governments, too, in exercising accountability for the high levels of public resources expended on universities need to be careful to avoid excessive micro-regulation. They have to balance the requirement for accountability with the recognition that creativity, intellectual dynamism and scientific development are dependent upon quite high levels of institutional and academic autonomy (King, 2006, p5).

In contrast to command and control regulation (e.g.; Health & Safety; Hazardous Waste; road speed limits) where control is exercised through standards imposed and backed by the threat of legal sanctions, enforced self-regulation combines regulatory guidelines with organisational objectives (Baldwin & Cave, 1999), lessening the regulatory burden.

In managing public funds, risk-based regulation has become increasingly popular (Rothstein et al, 2006b) in an attempt to ensure efficient and effective use of resources. Such governance seeks to ensure proportionate responses in relation to risks, with the establishment of appropriate levels of control. Risk-based regulation is:

> ... exemplified by the incorporation of risk assessment and management procedures into decision-processes to manage,

> among other things, organisational priorities, liabilities and reputation (Rothstein et al, 2006b, p1056).

Risk-based self-regulation plays a central role in the administration of HE funding, and is linked to accountability within the regulated organisation.

> We will take an increasingly risk-based approach to ensuring that the public funds we distribute are well spent, relying more on well led, governed and managed institutions' own accountability processes (HEFCE strategic plan 7/2/7, on web site).

The scope of this risk-based approach is wide-ranging and diverse (Power, 2007); a Treasury report lists 63 national regulatory bodies managing risks to the public in the UK (Hampton, 2005).

The Better Regulation Review Group[9] (2004) reviewed whether HE policies met the principles of good regulation and are of as 'lightest touch' as possible. They welcomed the steady emphasis on reducing the burden of accountability, particularly in relation to long-term proposals for funders to apply a lighter-touch regulatory and accountability regime to well-run universities. In 2008, HEFCE introduced a 'single conversation accountability process', implying an increasing use of statistics and pre-defined performance measures (HEFCE, 2008) consistent with the 'action-at-a-distance' approach (Foucault, 1979) in the context of enforced self-regulation. The main purpose of the single conversation is to simplify the accountability process. The framework puts institutions in control of the risk assessments made about them by HEFCE, providing a strong incentive to identify failure to satisfy external transparency demands as risks to the organisation and accentuate the aspects that are measured.

> For HEIs about which we have no major concerns or queries - the great majority of them - the main outcome will be a letter updating our risk assessment of the HEI, and data that benchmark

[9] The Better Regulation Review Group was set up by the Minister for Higher Education and Lifelong Learning in March 2003, to oversee the implementation of the recommendations of the Better Regulation Task Force Report, *Higher Education: Easing the burden*

> its financial performance against the whole sector (HEFCE, 15/2008).

These changes aim to reduce the administrative costs associated with regulatory demands. In 2004, PA Consulting estimated that the HE sector spent 3.6% of its total income (or around £223 million) on accountability issues each year and estimated that as a result of more cost effective regulation, this had reduced by some 25% since 2000 (HEFCE, 2007).

An indirect supervisory role for the state relies on HE institutions demonstrating a sound system of internal control. Regulatory targets and measures of performance become the indicators of success or failure. A reduction of complexity is valued for its own sake as the basis for a shared language to support decision-making and the use of qualities as quantities is common where there is a demand for metrics, giving measurement systems an 'invented' accuracy which reflects wider cultural anxieties and the need for numbers (Power, 2004b). In risk assessment, the assignment of risk severity and frequency ratings is valued even though potential future events cannot be calculated in any meaningful way. Despite the questionable basis of such measurement systems, they direct management attention and can have real consequences. The introduction of managerial systems developed in private organisations fosters an approach in which recipients of public services (e.g., students and patients) have become customers who utilise statistics and league tables as measures of success in exercising market choices. The customer provides the disciplining gaze, whose critical stare is internalised as a force of self-control and self-policing, and in this climate, schools, universities and hospitals are converted from utilitarian institutions into terrains of consumption (Gabriel, 2005). While performance measures are evident in selective research funding, in the case of teaching, market forces are allowed to drive quality.

> There are currently no attainment-based public-funding implications as is the case with research (Glass et al, 2005, p122).

Teaching assessments are published in the *Times Educational Supplement* and league tables are expected to influence the student enrolment on which funding is based. The notion of student as customer is reinforced by the payment of university fees.

The introduction of risk management is taking place at a time of considerable change in the regulatory environment and technologies of control. A lack of academic engagement with the implementation of accountability regimes may have negative outcomes for development of the regulatory framework.

> Higher education institutions are large organisations, staffed by intelligent people, and with powerful and influential connections. In no sense can they credibly cast themselves as innocent victims of the system. If the accountability system is unsatisfactory, at least part of the cause lies in the willingness of institutions themselves to go along with it; either to refuse to engage at all in questioning regulation, or to do so looking solely at the interests of their own institution, rather than those of higher education as a whole (Better Regulation Review Report, 2004, p6)

This section has illustrated how the dual role of HEFCE as a funder and regulator enforces self-regulation that adopts private sector best practice to facilitate access to funds. The regulator relies on self-monitoring of internal controls by the regulated organisations for assurances and data outputs. However, HEFCE had concerns, based on evidence, about the reliability of data from across the sector and the move towards 'lighter touch' regulation. Universities were in control of the information gathered and provided, and unreliable reporting posed a risk to the regulator, a situation they describe as 'not acceptable', since funding is based on such data (HEFCE, 2007/11). This literature review suggests a high potential for unexpected organisational responses to such demands for transparency and associated control through risk management to achieve organisational aims. The following section overviews key aspects of the ERM model recommended in the HEFCE risk management guidance.

2.8.3 The HEFCE Risk Management Guidance

This section details the governance requirements and the risk management framework that constitute the self-regulatory normative model for the case study institution. In tune with the NPM pressure to adopt private sector practices, in 2001 HEFCE stated that the underlying principles of the Turnbull Report (ICAEW, 1999) had been accepted by HEFCE as appropriate for the HE sector, and in their Accounts Direction (HEFCE Circular Letter 24/2000), set a timetable for implementation. Risk management requirements for HE institutions are integral to the several key regulatory documents for the sector: the Financial Memorandum with HEFCE (HEFCE 2003/54), the Code of Practice for accountability and audit (HEFCE 2004/27), the annual accounts direction from HEFCE (Circular Letter 23/2003) and are elaborated on in HEFCE Circular Letter 12/2002 (HEFCE, 2005). Compliance with these requirements is steered by the Guide to Good Practice Risk Management (HEFCE, 2001). HEFCE risk management governance recommends 'best practice' gleaned from the private sector (in which evidence of the benefits is slight at best), embodied as 'requirements' with a timetable for implementation. As in the private sector, the guidance emphasises there is no single correct approach for all institutions; it rests on the organisation itself to define appropriate controls.

The good practice recommendations utilise findings of a 1999 risk management survey of 91 HE Institutions to focus advice on the most significant areas. Figure 2.2 illustrates the classification of risks into categories.

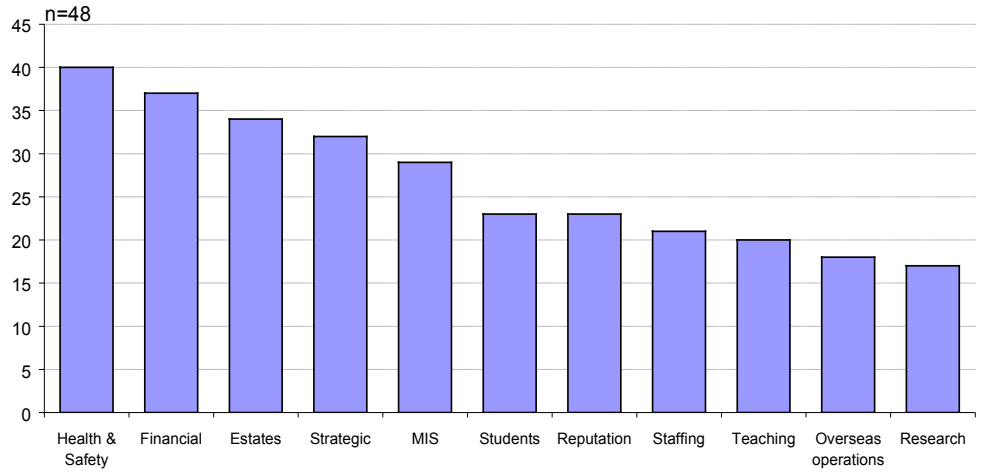


Figure 2.2 Categories of Risk Identified

Source: HEFCE, 2001, Figure 4

The grouping of risk into categories has been described as 'silo' risk management, in which different calculative practices are developed to assess each risk type (Mikes, 2009). HEFCE (2001) recommends an integrated approach to risk management, without considering the difficulty of reintegrating silos. If financial losses or gains in each category cannot be accurately estimated, this becomes a complicated matter. The guidance also cites key elements of the Turnbull Report (ICAEW, 1999) that impact on the design of risk management systems (Table 2.3).

Disclosure requirements	Assessment Aspects of Internal Controls	Internal Control System Requirements
The governing body acknowledges responsibility for the system of internal control	The nature and extent of the risks facing the organisation	Embedded in the operation of the organisation and form part of its culture
An ongoing process is in place for identifying, evaluating and managing the significant risks	The extent and categories of risk which it regards as acceptable	Capable of responding quickly to evolving risks
An annual process is in place for reviewing the effectiveness of the system of internal control	The likelihood of the risks concerned materialising	Procedures for reporting any significant control failings immediately to appropriate levels of management. This needs extension to the governing body, where appropriate.
There is a process to deal with the internal control aspects of any significant problems disclosed in the annual report and accounts.	The organisation's ability to reduce the incidence and impact on the organisation of risks that do materialise.	

Table 2.3 Key Risk Management Elements of the Turnbull Report
(Source: adapted from HEFCE, 2001, p34)

The table illustrates that the disclosure requirements, in Column 1, are auditable, provided responsibility has been acknowledged, and the required processes established, no consideration of their effectiveness is necessary. The difficulty of obtaining measurement outputs in relation to Column 2, assessment aspects of internal control, form the particular area of interest for this thesis, and are discussed in detail within the findings chapter. Column 3 contains elements that require an assessment of risk process embedment and responsiveness to risks, neither of which are easily measured; and requires a procedure for monitoring of significant control failings, which could be verified. The design of management systems using this model is likely to focus on those aspects that are measurable or auditable.

> Because some aspects of performance are more difficult to quantify and measure, the main danger inherent in modern control systems design is that it is these aspects that get relatively less emphasis (Otley, 2003, p325).

Such outcomes are described as 'narrowing' by Propper &Wilson (2003), characterised as concentration on parts of the process that are included in

summary measures linked to the aims of the regulator and access to funding, to the detriment of other tasks.

HEFCE suggest that 'given their expert knowledge and their independence' (HEFCE, 2001, p30), institutions' own internal audit team could usefully undertake the recommended annual review of control system effectiveness, placing emphasis on accounting controls.

The trend towards measuring outputs, with professionals and organisations being held accountable for their achievement (Berry et al, 2005) results in a link between the aims of the regulator and risk interpretation by members of an organisation. Targets and assessment methods are defined by HEFCE, as the regulatory body. Since operational risk is conceptualised as failure to achieve organisational aims (HEFCE, 2001), the research examines how the aims of the regulator are interpreted within the University during risk assessment activities. Table 2.4 lists HEFCE's stated strategic aims and their monitoring approaches evident at the time of the study.

Aim	**HEFCE Monitoring**	**Linked to Funding**
Enhancing excellence in learning and teaching	Quality Assurance Agency (QAA) institutional audits	No
Widening participation and fair access	Metrics reported	No
Enhancing excellence in research	Research Assessment Exercise (RAE)	Yes
Enhancing the contribution of Higher Education to the economy and society	None	No

Table 2.4 HEFCE Aims and Monitoring Measures[10]

[10] HEFCE updated their aims in June 2009 to include 'Employer engagement and skills'. The assessment of research excellence is also changing, the RAE will be replaced by the Research Assessment Framework, with proposed changes in assessment criteria, in 2014. These provide examples of how aims and methods of assessment change over time, providing new sources of risk for regulated organisations.

There is a view that what gets measured generally gets done, what is not measured may suffer in comparison and prediction of outcomes is difficult (Otley, 2003). Risks arise from pressures associated with increasing use of statistics and league tables. The aims of the regulator illustrate the presence of competing and conflicting aims. They are not mutually compatible; to satisfy one reduces success in achievement of another. The conflict between different aims of the regulator can be seen in interpretations of fair access related to 'merit'. One interpretation of merit is examination grades; highest is best, compatible with the aims of teaching excellence, as measured through progression targets. A review of access to 'widening participation' found that examination grades remain a significant barrier to places in Higher Education.

> While participation by under-represented groups has increased significantly over the last 10 years, the gap in participation rates is still wide. Its principal cause is the continuing pattern of lower prior attainment by young people from poorer backgrounds (Admissions to Higher Education Review, 2004, p18).

The HEFCE aims provide an illustration of multiple aims and competition between them. Pressure towards 'widening participation' requires consideration of factors other than academic grades for 'merit', factors that are not necessarily advantageous for the aim of 'teaching excellence' especially in the light of increasing student numbers. Satisfaction of one stated aim, such as teaching excellence (if measured as highest grade best), can reduce success in relation to others, for example, widening participation or research excellence.

In addition, compliance responses may filter or distort the aims of the policy (Hood et al, 2001). For example, HEFCE emphasise the link between high quality research and teaching, with two possible interpretations; improvement of research quality linked to existing teaching syllabuses, or closure of courses in areas that received poor RAE ratings. The introduction of a market for students also makes some courses less viable than others. In mitigating these risks, as HEFCE risk

guidance would recommend, closure of teaching departments in some universities is at variance with the actual intention of the government.

> A recent example of the tension between state encouragement of the market and corporate characteristics of universities, and state efforts to maintain strategic and political direction over them, is government concern at the closure, or proposed closure, of chemistry and language departments by institutions, taken on strategic and market grounds by the universities but with outcomes that the government perceives as disadvantageous for the country as a whole (King, 2006, p11).

The funding council model creates contexts within which individual institutions have to determine how they are going to react; it is the responsibility of the institutions themselves to support or close chemistry or physics departments (Tapper & Salter, 2004). The Better Regulation Group (2004) suggest that the slide towards a "compliance culture" in the HE sector finds difficulty in offering intelligent challenge to such external demands, or in effectively mitigating their damage during implementation. Furthermore, they suggest that institutions have come to expect unreasonable regulation, and consequently regulated organisations interpret regulation unreasonably for themselves[11]. It is paradoxical that in acting to reduce risks, in line with recommended guidance, institutions are seen as unreasonable, emphasising the importance of regulatory understanding of how institutions identify and prioritise risks.

In 2005, the effectiveness of HEFCEs initial risk management guidance (2001) was reviewed by studying the implementation in 6 Universities and 3 Further Education colleges, in consultation with the Standing Conference of Principals and HEFCE. The resulting advice, recommended by HEFCE, is contained in 'Risk Management in Higher Education: A Guide to Good Practice', by PricewaterhouseCoopers (HEFCE, 2005), a major international accounting and consulting firm resulting from the merger of Price Waterhouse and Coopers & Lybrand.

[11] As exemplified in the production of Risk Registers that demonstrate compliance with HEFCE guidance, but are of no additional utility to the organisation.

It notes the development of the Combined Code (2003) in setting out principles of governance in the private sector, and states that while the Code is not mandatory, it builds on Turnbull and provides an important context for current requirements in the HE sector. The guide provides 'practical and pragmatic guidance' to HE institutions at all stages of the planning and implementation of risk management with the intention of improving organisational efficiency and the ability to grasp opportunities (HEFCE, 2005). Figure 2.3 illustrates the recommended framework.

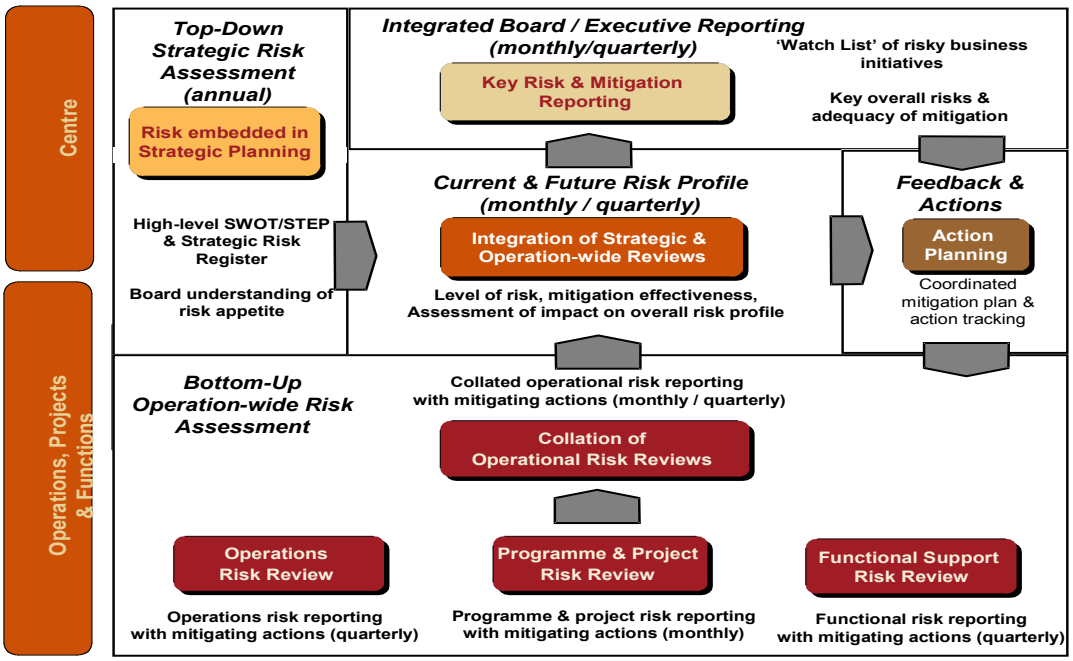


Figure 2.3 Elements of an Institution-wide Risk Management Framework
(Source: HEFCE, 2005, p6, Figure 1)

To investigate how formal operational risk assessment is being carried out, and explore areas of interest identified in the research questions in this case, risk management training collects data from the activities depicted in the bottom right and left of the diagram ('Operations Risk Review' and 'Functional Support Risk Review'). This HEFCE framework provides the basis for the formal risk management process within the study organisation and illustrates the control system aspects of the model. As data is gathered across the organisation, it is integrated for management review, the review leads to feedback and actions to those

providing input to mitigate risks, forming a control loop. The risk assessment outputs are checked against pre-defined levels of acceptability to channel key information to senior management, who feedback to subordinates and enable mitigation to occur, where appropriate. This cycle is repeated, and the risk focus changes in response to identified concerns. A weakness in any stage of the process will have an impact on overall process performance. It is instructive to note that the illustrated model does not clearly identify links to existing processes management controls, except risks embedded in strategic planning. This section has summarised important aspects of the 'best practice' normative model that forms the basis for the risk management implementation investigated in this study.

2.8.4 Summary of Regulatory Context of Case

This overview of the introduction of private sector practices in HE, and the recommended risk management framework for the case, provides the background for the research problem that is being addressed here. The next section places this study within the context of existing studies of risk management, highlighting gaps in the literature to be addressed by the empirical and analytical contribution of this case.

2.9 Existing Empirical Studies of Risk

This section will explore the literature in the field of risk, to which this thesis contributes. The majority of academic literature identified for review during the literature search process equated risk to the probability of physical harm or danger (e.g., Fischhoff et al, 1981; Gigerenzer, 2003; Kasperson, 1992), which have a potentially measurable outcome (e.g., number of deaths, high radiation readings).

> Normally risk is defined by its autonym 'safety' and by its relation to practical affairs. But this amounts to a paradoxical or at least ambiguous definition because in practical affairs there is no absolute safety (Luhmann, 1996, p4).

Several academic disciplines include the study of risk as hazard, although none provide in-depth studies of the qualitative aspects of assessment. These include studies of the implementation of regulation related to hazards (Hood, 2007; Rothstein et al, 2006b), which highlight concerns about blame associated with risk decisions, but empirically these provide little evidence about operational risks. The analysis of the Challenger shuttle disaster (Vaughan, 1996) illustrates the contribution of organisational norms and behaviour to decision-making that preceded the accident. In relation to sociological perspectives, Renn (1992) observes that any attempt to classify studies of risk and link them to underlying theoretical concepts is like trying to find order in chaos. The risk as hazard literature has yet to establish a consensual paradigm.

A focus on financial risks has been the prevalent approach in academic studies of strategic risk management (Gates, 2006), but little has been published concerning the implementation of ERM models. In investment banking, a study reveals that trader behaviour emerges from a web of circumstances and individual causes, such as attainment of bonus targets, that impact on risk taking and decision-making (Fenton-O'Creevy et al, 2004). In financial markets, Willman et al (2006) suggest that large organisations make decisions that strongly influence the overall level of risk in the market, illustrating the link between risk in an organisational context and decision-making. In a study of banking (Mikes, 2009, p28), a Director of Operational Risk remains cautious about the use of risk measurements, particularly since he considers that most losses are based on human behaviour and he queries "how do you measure it?", confirming the need to include qualitative aspects in assessments.

> A significant remaining challenge is how to deal with risks that can't be measured – not just the risk of uncertain events, but also the so-called soft risks such as failures of business ethics and reputation risk (Crouhy et al, 2006, p21).

A study by PricewaterhouseCooper (2006) of 23 Finnish companies (excluding financial and insurance organisations), found that although risk management has gained considerable attention amongst the respondents, while it was seen as good governance practice and good for business, importantly, it was mostly still not really aligned with strategic and operative business decisions.

In the USA, an exploratory study based on data gathered from 123 organisations, found that US organisations have less-developed ERM processes than international organisations, and suggests a number of factors that are positively related to the degree of ERM implementation, including industry sector, apparent strength of management support and the presence of a 'Big Four' auditor (Beasley et al, 2005).

Mikes (2009) observes that ERM is a nascent management control practice and it remains unclear how it will ultimately benefit organisations that adopt it, indicating a need to study how such practices are implemented to identify potential limitations or benefits. A survey of 271 companies found the greatest impediment to ERM implementation is 'competing priorities' and highlights a lack of academic studies in this area (Gates, 2006).

> We need to understand the contingent and conditioned nature by which critical events are processed by institutions. How actual and possible events are perceived, classified, dramatised, made visible and mobilised will determine their relevance for risk management agendas (Power, 2004a, p39).

In addition, questions are raised about the consistency of process outputs, but there has been very little investigation of how risk assessments function in the absence of historical or statistical data. Power has written extensively about risk management (2009, 2007, 2004a, 2003), the increasing pressure for auditability (1996, 1997, 1998) associated with a demand for numbers (2004b) and the appearance of control over uncertainty. However, within this body of work there is little empirical evidence of how operational risk management is actually practised in organisations, providing the opportunity for an in-depth case study to contribute to developing deeper understandings of the issues that are suggested as significant concerns by Power. The value of field research is to add to the overall picture by providing illustrations of the ways in which risk management and corporate aims interact to alter internal processes to reduce risk to the organisation and satisfy accountability demands.

The review of risk management implementation in HE by PricewaterhouseCoopers, commissioned by HEFCE (2005), did not include a detailed study of the risk assessment process, and concluded from the evidence gathered that governance implementation was proceeding well, enabling organisations to improve their decision-making processes. This thesis represents a more detailed critical examination of the transfer of knowledge in relation to HEFCE risk management governance, and the interpretation and implementation of ERM in one organisation, with a focus on the problematic nature of risk assessment itself, an area of concern that is skimmed over in the HEFCE evaluation.

This section reveals gaps in the literature, significantly, a paucity of information about qualitative risk assessment, particularly in the context of operational risk. Furthermore, there is little empirical data in relation to what risk means in an organisational context and how risks are identified and assessed, confirming that this research makes an important contribution to the field.

2.10 Summary

This literature review highlights the need to examine how compliance with risk management guidance is understood and interpreted in an organisational setting. The focus on qualitative assessment and uncertainty in this thesis reflects the difficulty of predicting outcomes in social systems, and research question 1 examines how the model proposed in the risk governance is interpreted and implemented, investigating the applicability of methods developed in the private sector. This literature review provides critical perspectives on the problematic nature of risk and the implementation of governance that inform the analysis of how organisational members practice risk assessment.

The changes to the governance context of HE influence the way in which risks are identified and assessed, not only in relation to HEFCE risk management guidance, but also to broader changes in accountability, transparency and technologies of control. Self-regulatory governance implementation stimulates investigation of individual and group accounts of transparency in relation to

accounts of what others see and measure, including accountability for achievement of aims and targets, and how these impact on responsibility attribution, including the influence of organisational boundaries, authority and role on the management of risk. In addition, the variance in ways of seeing within an organisation provides an important reason for research question 2 to consider whether group and role influence risk identification and management approaches. The identification of sub-goals and competing aims from regulators, partners and other funding bodies illustrates why the organisational setting can influence risk assessment outcomes.

The literature reveals how external views, in concert with risk tolerance and degree of control, influence what constitutes compliance and research question 3 investigates what constitutes acceptable risk to members of the organisation.

Finally, a critical evaluation of the nature of operational risk prompts research question 4 to examine the role of uncertainty in the assessment process, including lack of clarity about aims and how to achieve them, lack of information and whether such outputs constitute a form of measurement. If outputs are not replicable, this review suggests the value of the recommended HEFCE framework is seriously undermined.

The monitoring of compliance with guidance, or best practice rules and procedures, is an important aspect of risk related to control systems.

> Technologies of control can be thought of as manufactured sets of 'extra eyes': rules and procedures are designed to point human eyes and behaviour in designated directions; surveillance technologies are designed to supplement the human eye and cognitive capacity by revealing in detail what the human eye cannot see (Vaughan, 2005, p37).

Against this background, this study seeks to investigate both the implementation of governance and how monitoring aspects have an impact on control practices. March (1981) suggests that organisations rarely change in a way that fulfils the intentions of a particular group. The organisational responses to HEFCE risk management guidance are expected to reveal unexpected and unforeseen outcomes. Implementation may place emphasis on the process to provide

records to justify actions taken (or not taken) in the event of litigation, or for external assessors, resulting in 'tick-box' compliance (Power, 2006), in preference to the governance aim of directing and improving organisational risk management.

Exploring ERM practices, as embodied in the HEFCE guidance, within an in-depth case study enriches understanding of management control and strategy implementation more generally.

> It seems essential that more emphasis should be placed on the study of real control systems as they operate in practice (Berry et al, 2009, p32).

This literature review illustrates how the study contributes to the debate on the regulatory, corporate governance, management control and accountability issues that are emerging (Mikes, 2009) by investigating how risk assessment operates. This thesis contributes to the literature concerning operational risk assessment and management, and through its focus on organisational context, adds to studies in the field of organisational control, regulation and HE. In addition, the link between aims and risks enables the study to consider the effects of targets and enforced self-regulation on risk assessment activities.

The next chapter describes the process of selection of theoretical frameworks, the reasons underlying those decisions and outlines key aspects of the selected theories that were used to develop the analytical framework for the study.

3 Selection of Theoretical Approach

3.1 Introduction

This chapter elucidates the theoretical perspectives that enable the researcher to "stand on some conceptual infrastructure" (Jonsson & Macintosh, 1997, p378) to develop explanations of empirical findings that have wider relevance than purely interpretative accounts of a case can provide. The first section describes the process of identifying suitable frameworks for the analysis of risk narratives. The second details the Director, Detector and Effector model (Hood & Jones, 1996) and the benefits of utilising such a theoretical viewpoint for the analysis of normative elements of the study. The third provides a comprehensive review of Social Systems Theory (Luhmann, 1995a) and illustrates the features of a reflexive approach that contribute significantly to analysis of talk about risk in the study.

3.2 Selection of Theoretical Approach

The adoption of a particular theoretical approach recognises that analysis requires reduction or simplification of the real world, however, the benefits for a complex system, such as the transformative process of Higher Education, is in the ordering of data to gain an insight into factors influencing risk interpretation. The analysis forms part of a reciprocal process directed by expectations from theory towards factual investigation and then reaction of the results of this investigation on the theory (Parsons, 1937).

Since time, opportunity and money are limited, the investigation requires a choice of theory that enables explanations to be developed within these constraints (Denscombe, 2002). The search was on for a theory offering a system of concepts and statements, models, or principles, which, in concert, would make the empirical world of risk assessment more intelligible (Krimsky, 1992).

3.2.1 Review of Possible Theoretical Approaches to Investigation of Risk

I sought a theoretical approach that would enable the research questions to be evaluated within the complex organisational context of the case study. Systems Theory, which was developed by social theorists centred on Talcott Parsons in the 1950s and 1960s, sought to integrate developments in fields such as biology, psychology and economics into sociological theory. Systems Theory is useful in examining relationships within and between component parts of a whole, as this study aims to do. Several different approaches to systems analysis have been developed within the Social Sciences.

The first type of systems analysis approach examined for possible use within this study was Soft Systems Methodology developed by Checkland (1981). This type of methodology is well suited for use in action research, in which system changes are planned, implemented and reviewed. The method builds purposeful activity models as devices to structure analysis and is used mainly for systems problem solving (Checkland & Scholes, 1999). The applied aspects of the project contain elements of 'action research' with a focus on practical problem solving in a social situation with a view to improving the quality of action within it (Burns, 2000) and reflexive concerns associated with this approach are discussed in the Chapter 4. Whilst acknowledging some similarities with action research, this study emphasises a wider academic aim of knowledge production linked to theoretical generalisations, requiring a more structured analytical approach. The Soft Systems Methodology is weak in relation to theoretical analysis and is thus unlikely to lead to research outcomes that can be generalised.

The next type of systems analysis investigated for use has been utilised by Hood & Jones (1996) for analysis of control systems, in a risk management context. They describe control systems as ways of gathering information (Detector), ways of setting standards, goals or targets (Director), and ways of changing behaviour and enforcement to

meet standards or targets (Effector). The Detector, Director, Effector (DDE) model provides a close parallel to the Elements of an Institution-wide Risk Management Framework (HEFCE, 2005, see Figure 2.3 of this thesis) being investigated in this study. The risk reviews are a form of Detector, the strategic risk assessment with risk embedded in strategic planning represents Director activity and Feedback and Actions act as the Effector element. This alignment provides an ideal lens through which to focus on the control system specifically related to risk governance. This conceptual approach suggests one of the important epistemological issues in systems theory. Is the system 'closed' or 'open' in relation to the environment? The DDE model is conceptually an open system detecting and utilising information sources external to the system, and the boundary is permeable to signals from the environment. This topic will be explored further in relation to SST and reflexive systems.

The elements of the DDE model can be visualised as an iterative spiral, in which the process aims to reach an acceptable level of risk for the organisation. The diagram below (Figure 3.1) illustrates how the model maps to a generic risk management process.

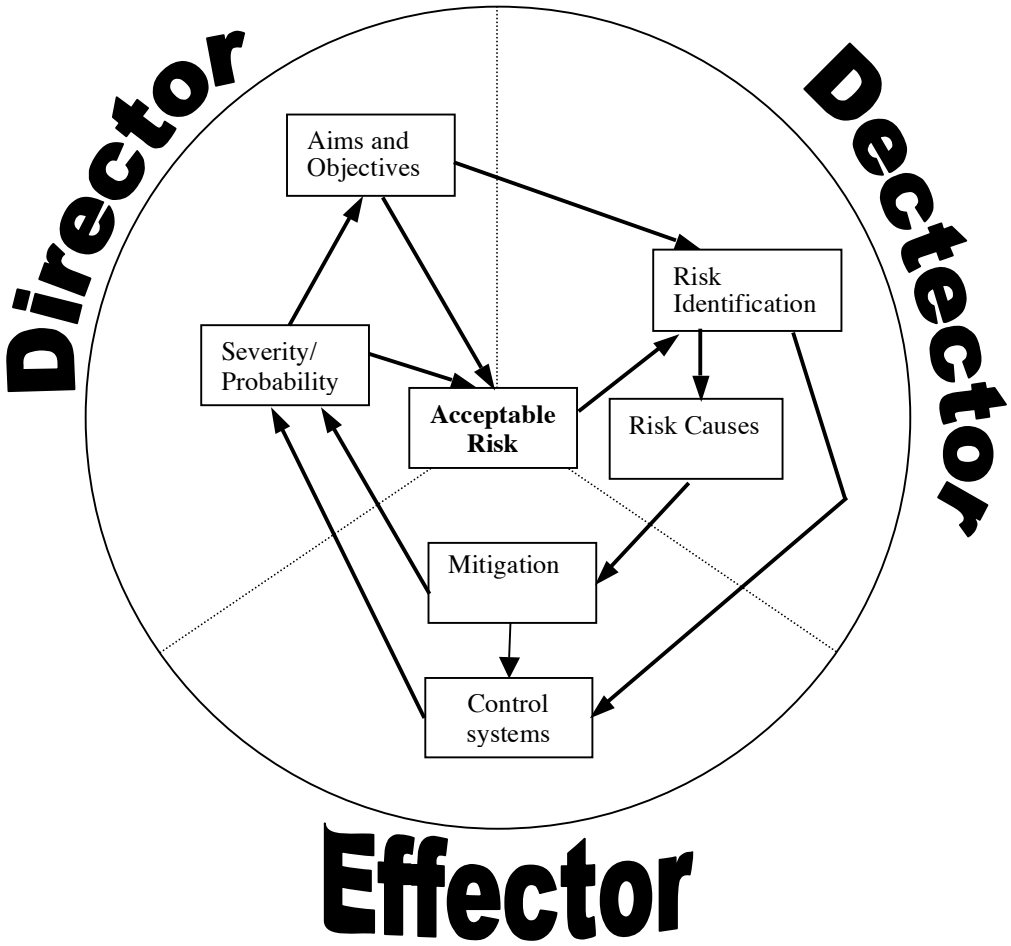


Figure 3.1 Director, Detector, Effector: Risk Management Process Model
(Source: adapted from Hood & Jones, 1996 and Boehm, 1988)

The figure uses the concepts of Director, Detector, Effector (Hood & Jones,1996) to illustrate interaction of risks and risk management controls with reference to a model used for software design when the requirement is continuously changing as the software develops (Spiral Model, Boehm, 1988). My placing of the aims and objectives within this iterative spiral reflects and acknowledges their changing nature. This model provides a good basis for analysis of the normative HEFCE risk management framework. The themes arising from the literature require a more complex theoretical lens to examine those aspects of risk that are not directly related to the governance control system, such as organisational context (King, 2006; Hutter, 2005; Dearlove, 1998a); trust in numbers (Porter 1995; Power, 2004b); competing aims (Berry et al,

2005; Mikes, 2004); and reflexive interpretation of risk (Gregersen, 2003; Adams, 1995).

The choice of an additional theoretical approach now began to focus on the ontology of operational risk, in which reflexive concerns are at work. Recursivity-based studies provide advantages for exploring the depth and dynamics of organisation that other approaches do not offer (Hernes & Bakken, 2003). Two theoretical approaches that incorporate recursive considerations were reviewed: Giddens; Structuration (1986) and Luhmann; Social Systems Theory (SST) (1995a). Both perspectives have common themes:

> Luhmann's autopoiesis and Giddens' structuration theory are convergent in several ways. First, they converge on the view of the significance of recursivity. Second, they view recursivity with structure as being both a constitutive and constituting entity. Third, there is the view that constitution happens though self-reference, something that is reflected in Giddens' reproductions and in Luhmann's autopoiesis (Hernes & Bakken, 2003, p1526).

Structuration theory primarily aims at recursiveness between the two levels of structure and action (Hernes & Bakken, 2003; Leydesdorff, 2010). One of the difficulties in the use of structuration for this case study is that structure is considered "outside of time-space" (Giddens, 1981, p171). This presents a problem in relation to empirical investigation of the questions asked within the study relating to organisational context, governance aims and existing control systems. Structure cannot be assumed to change itself, so there is a missing link needed to explain structural change; in contrast to Giddens' two-level theory, Luhmann incorporates the levels of events and processes, which allows greater understanding of how structure is changed in recursive operations (Hernes & Bakken, 2003).

> A system that is bound to use meaning as a medium constitutes an endless but complete world in which everything has meaning, in which everything gives many cues for subsequent operations and thereby sustains autopoiesis (Luhmann, 2002, p84).

Luhmann's SST (1995a) draws from biological theory and uses autopoiesis to explain structural change in a way that is easier to grasp than is the case with Giddens' structuration theory.

> Luhmann took Maturana and Varela's vision of how a cell works as his prototype for how to conceptualize social systems. In the same way that molecules produce other molecules in a circular process, communications produce communications. The ability to abstract from the individual that this provides allows him to make descriptions of modern society that are compelling to a degree matched by few if any other theories (Viskovatoff, 1999, p491).

It is suggested that much of the power of autopoiesis is as a source of 'creative lateral thinking' (Kickert, 1993). However, the key issue here was the alignment of the theoretical framework with the research questions, the data sought and the complexity of the phenomena being investigated. Of all contemporary social theorists, Luhmann has best understood the centrality of the concept of meaning to social theory and has most extensively worked out the notion's implications (Viskovatoff, 1999). Against this background, I felt most comfortable utilising SST to provide the explanatory lens through which the in-depth case study could be examined and explained. The two-tier approach places normative assessment within the DDE analytical framework, allowing SST to focus on reflexive concerns that reveal underlying influences on the normative outcomes. Luhmann's work stimulates my interest and informs my understanding of why social systems are unique and vary in unpredictable ways. The following section outlines key aspects of the theory that form the basis for the analytical frame in this thesis. As part of this review of SST, the criticisms that are levelled at Luhmann's work are also examined and relevant critiques are discussed.

3.2.2 Social Systems Theory (SST)

Niklas Luhmann is widely recognized in Germany as the most noteworthy contemporary social theorist (Viskovatoff, 1999), yet in much of the Anglo-Saxon world he is virtually unknown among

professional social scientists (Bechmann & Stehr, 2002*)*. Social Systems Theory (1995a) was published in German in 1984, and represents an ambitious framework designed to investigate social systems in many contexts. Works available in English demonstrate the wide range of Luhmann's contribution to the Social Sciences, including Religion (1977); Trust and Power (1979); Differentiation of Society (1982); Law (1985); Love as Passion (1986); Ecological Communication (1989); Essays on Self-Reference (1990c); Political Theory in the Welfare State (1990d) and Reality of the Mass Media (1995b).

Social Systems Theory (SST) has been described as a 'grand theory' aimed at explaining society, and the applicability of such a complex framework has been questioned in relation to a single case study. Conceptually, as with biological sciences the complexity of cells appears to increase when using a microscope, this in-depth single case and the nature of risk is sufficiently complex to warrant a comprehensive theoretical lens. Looking deeper will reveal more complexity. Through developing an understanding of SST, a potential framework for examining complex and contextualised organisational characteristics from the viewpoint of participants emerges. The concept of the system is Luhmann's essential starting point (Bechmann & Stehr, 2002*)*.

> Speaking generally, we can divide the development of systems theory into three stages: (i) the theory of closed systems; (ii) the theory of open systems; and (iii) the theory of observing or self-referential systems (cf. Luhmann, 1995[a]: 5–11). My considerations derive especially from the third and last stage of the development of systems theory (Luhmann, 2006, p37).

With the influence of Maturana & Varela's work (1980), Luhmann's autopoiesis makes an important distinction between two basic types of systems: psychic and social systems. Psychic systems form the basis of meaning creation. In the psychic system, thoughts are the basic elements of reproduction. Only these closed systems can know.

> It has been known for quite some time already that the brain has absolutely no qualitative and only a very slight quantitative contact with the external world (Luhmann, 1990b, p439).

Social systems, on the other hand, operate through the medium of meaning, and their autopoiesis takes place through communication (Hernes & Bakken, 2003). A social system is constituted as an action system based on communicative happenings (Luhmann, 1995a). In this way, Luhmann (1990b) considers that the intervention of systems theory can be described as a de-ontologisation of reality. The way we think and speak about things in the world is not determined by the nature of these things. It makes no difference whether these things are concrete items in the outer world or mental items in the inner world (Christis, 2001). Giddens finds that Luhmann's epistemes are too contingent and lack 'ontological security' (Hernes & Bakken, 2003). However, in a continually changing world with reflexive considerations forcing acceptance of multiple realities this ontological position enhances research into complex phenomena such as risk. I am freed from the distinction of real risk/false risk to investigate instead communication, interpretation and reflexive views of risk.

Luhmann (2002) describes autopoietic systems as products of their own operations, with properties such as dynamic stability, maintaining self-reproduction as long as possible. 'Autopoietic' systems are operationally closed, i.e. they contain all the elements required for self-reproduction. Closure, in this context, does not mean that such systems are not able to experience contact with their environments but that the only mode to get in contact is based on their own operations (Nassehi, 2005).

> An internal reference or self-reference and an external reference are processed more or less simultaneously. In other words, the system can switch from one side to the other at any moment—but only by means of internal operations. This explains the difference between the environment of a system from the standpoint of the observer and the environment as defined by the system itself as it oscillates between self-reference and external reference, or as it chooses specific emphases in one or the other direction for a certain amount of time but always under the condition that they may and can be revised and changed (Luhmann, 2006, p50).

Social systems are unreliable machines, to be distinguished from allopoietic systems that manufacture something other than themselves, such as assembly lines that use fixed programmes to transform inputs to outputs. They rely not on tight coupling, but on loose coupling to move from one state to the next, and this makes it possible for them to evolve into different structural types according to random links between the system and its environment. A sociological analysis of organisations classed Universities as above average complexity and loosely coupled systems, where 'errors are endless and frequently interact, there is a great deal of slack to prevent rapid propagation of errors' (Perrow, 1986, p146), showing marked similarities to Luhmann's description of autopoietic systems.

An autopoietic system reproduces, continuing unaltered, unless stimulated to change by communication from its environment that is recognised as a threat to system well-being or survival, e.g., failure to achieve organisational aims.

Communication is treated as information only if it is not just an existing difference; it is information only if it instigates a change of state in the system (Luhmann, 2006). An interesting suggestion that arises is that in organisations the communication of ignorance makes non-liability legitimate, implying that lack of awareness of risks relieves authority and responsibility (Luhmann, 1998).

Self-referential systems acquire information with the help of the difference between referring to self and to something other, and this information makes possible their self-production (Luhmann, 1995a). Information theory is also often conceived of in terms of a theory of difference and can be traced back to Gregory Bateson's formulation that information is 'a difference that makes a difference' (Bateson, 1972), and can be likened to 'management by exception' (Drury, 2005).

> The most radical assumption of Luhmann's mature theoretical approach is his emphasis on differences, more precisely on

> distinctions that are no longer seen as objective differences but as constructions (Bechmann & Stehr, 2002, p69).

Luhmann also utilises the notion of a distinction proposed by Spencer-Brown (1969) who conceives of a distinction making sense because it separates i.e.: 'marked space' (selection) and 'unmarked space' (set of possibilities). Technical communication devices have a defined message (technically constrained), in the case of social communication, the set of possibilities are socially constructed (in Luhmann's terms, conditioned).

Systems can be conceived as containing elements and relations. Conditioning of these systems occurs such that interpenetrations are not merely relations among elements; the connections are somehow regulated through conditions of possibility (Luhmann, 1995a).

> Social systems consist not merely of communications but also of expectation structures, even though that is not how Luhmann's theory is usually presented (Viskovatoff, 1999, p500).

The concept of expectation structures, in which the more explicit the expectation the more insecure it is, influences the output of risk assessments. In relation to risk management, the clearer the statement of an aim, (for example, recruiting 12 students, or between 9 and 15 students) the easier it is to fail to achieve it; expectational ambiguity can be seen as a strategy for creating relative security and for providing protection from environmentally conditioned disturbances (Luhmann, 1995a). Relations among elements can condition themselves reciprocally, enabling the system to produce and react to an unclear picture of itself. Conditioning within systems will influence risk identification in reflexive interpretation of external stimuli. SST is particularly helpful in explaining why some long-term issues that are 'normal' are ignored, even though they threaten local aims, since the system is conditioned to ignore such stimuli. Successful system conditioning works as a constraint (Luhmann, 1995a).

Luhmann's (1995a) notion of double contingency provides a semiotic framework in which the initial speaker provides information, and receives a response, but between both parties, there is the possibility that what is communicated is understood differently and the meaning is altered, although both parties believe successful communication has occurred. Understanding is never a mere duplication of the utterance in another consciousness. Consequently, interpretations of communication about risks within the University can be expected to produce a range of perspectives. It should be noted, that this theoretical perspective embraces a wide range of potential methods of communication, e.g., no action or response can be interpreted as 'information'.

Formal organisations regulate their boundaries primarily by membership roles and admission to membership, thus handling themes as something that can be expected from the system members because of their membership (Luhmann, 1995a). The SST perspective conceives of boundaries to systems as specific mechanisms whose purpose is both to separate and connect.

> No system can perform operations outside its own limits. If new operations are integrated it means that the limits of the system have been extended. Consequently, the system cannot use its own operations to connect itself with its environment since this would require that the system operate half within and half without the system. The function of boundaries is not to pave the way out of the system but to secure discontinuity (Luhmann, 1990b, p440).

The systems approach enables the groups to be defined and differences to be explored, both in relation to the system self-image and interaction with systems that form the environment for the group (both within or external to the University). Interpenetration is reciprocal (Luhmann, 1995a).

> An autonomous domain of the social does indeed open up before one, with human actors being situated, as Luhmann stresses, in the environment of social systems instead of composing them, as one has tended to suppose until now (Viskovatoff, 1999, p487).

Systems interact through interpenetration (not a general relation between system and environment but an intersystem relation between systems that are environments for each other).

Competition is present in an organisation when one system's goals can be attained only at the expense of another's. Consequently, in organisations, hierarchy takes the place of physical force in channelling chances of conflict, and the initiation of conflict is discouraged; only superiors are free to say 'no' (Luhmann, 1995a); they decide which aims to emphasise. Consequently, the planner is never in complete agreement with observers about the value ranking of goals, probable effects and what constitutes acceptable risk.

In *Risk: A Sociological Theory* (Luhmann, 2005) uses SST to analyse and explain social responses to risk. In earlier epochs people thought of good or bad fortune rather than of risk (Luhmann, 1996). Unpredictable events were explained and neutralised by attribution to an external source. In recent times, risk has come to be associated with decision-making, particularly in organisations (Power, 2004a, Vaughan, 1996).

> Since decisions are always operations of a system, be it an individual person or a social system, we can characterise risk by the internal attribution of possible harm. A possible harm caused by the environment has to be externally attributed and can be called danger (Luhmann, 1996, p6).

Risk evaluation is not simply a problem of avoiding error. There is no safe way to make decisions since they are inextricably linked to uncertainty.

> Decisions try to give a structure to the future. They cannot determine the future state of the world or the system but they can project a difference into its open horizons. The standard terminology for this is goal, objective, end, aim … (Luhmann, 1996, p12).

Furthermore, Luhmann (2005) suggests that risk is understood as future damage that can be linked to decisions. From this perspective, the

responsibility for making decisions can be associated with accountability and the possibility of blame. The decision-making system takes into account that others are observing its decisions and that there will be reactions, as part of the risks of the decision (Luhmann, 1996).

The concept of risk gets away from the idea of there being only one plausible judgement in relation to achievement of aims. It unifies uncertainties and multiple aims in the present and solves them through rational risk management; in the event that the unforeseen occurs, the decision can still be viewed as risk-rational (Luhmann, 1998). Negative aspects of the internalisation of risk are exemplified by strategies to defend against risks including:

> 'vain planning, vain applications, drawn out appraisal processes and above all the risk of not exploiting opportunities' (Luhmann, 2005, p196).

The outputs of such processes form blame-protection shields for individuals and groups within the organisation.

Temporal elements within a system (events, actions) always contain an aspect of surprise, are always new combinations of determinacy and indeterminacy and linked to this is the concept of expectations (Luhmann, 1995a). The expectation creates the alternatives of conformity or deviation. In part, this concept is used as a component of roles and norms and can be linked to decision theories (McGrew & Wilson, 1982). The implementation aims of governance are understood through internal interpretation of requirements, through the process of double contingency, and may result in unintended outcomes, lack of response or compliant behaviour. In complex organisations (Perrow, 1986), processes and feedback loops can be difficult to trace and understand and may interact in unexpected ways, sometimes resulting in unwanted changes, or in insufficient change in relation to the desired effect.

> The outcomes may hence be counter-intuitive for participants, and unintended consequences of purposeful action can be expected to prevail in a networked environment (Leydesdorf, 2010).

The networked environment provides a changing landscape of competing and conflicting goals, and the system ignores communication that is not interpreted as a threat to its well-being, to enable a focus on those that are. The aims of the regulator are recognised as 'information' by the system, and reflexive interpretation emphasises compliance demands linked to funding access, to enhance survival of the system.

The temporal aspects of the risk assessment process are exhibited in the way in which decisions are contingent upon previous decisions and are expected to be influenced by existing organisational structures or control systems. The concept of a process designates an increase in selectivity of a special kind: an increase in selectivity that enlists time (Luhmann, 1995a). A succession of events is a process if, and only if, it fulfils the characteristic of increasing selectivity. Risk assessment is intended to result in actions that mitigate risks i.e., selected actions.

Since human beings, understood as self-grounding subjects, can choose the distinctions through which they dissect the world and designate what is to be observed (Luhmann, 2002), risk discourse provides access to ways in which meaningfully self-referential systems observe and analyse other such systems, within, and external to, the organisation. Processes of self-observation make the difference between the system and the environment available within these systems themselves, and both influences are reflected in risk identification and assessment. This theoretical framework forms the conceptual architecture for the analysis of narratives within this thesis.

It would be wrong to provide the impression that the theory is without its critics, and this section goes on to outline and reflect on these critiques. Even the basic premise of Luhmann's SST is questioned, since it is

constructed around the system/environment distinction. Rodrigo (2001) suggests the problem lies in the distinction itself because most sociologists do not work with this distinction. However, in considering the theoretical perspective earlier in this section, it is clear there is a tradition of systems theory use within the Social Sciences (Parsons, 1937; Checkland, 1981; Hood & Jones, 1996), with an additional body of work, specifically linked to SST, in the studies cited below.

A further claim made against Luhmann's work is that it cannot be made empirically relevant.

> Although Luhmann's theory often gets characterized as a very abstract and over theorized sociology, it is in fact a remarkably empirical theory because it is interested in the basic processes in which social systems occur and in which structures come into being (Nassehi, 2005, p181).

Brans & Rossback (1997) observe that Luhmann's theory of 'autopoiesis' has inspired a great number of empirical analyses in a variety of contexts. They cite examples in the work of Stichweh (1994) in the sociology of science; Hutter (1989) on the 'structural coupling' of economy and law as subsystems of society; Baecker (1991) on economic steering through banks; Teubner (1991) and King & Trowell (1992) on the workings of the legal system; and Schiepek in social psychology (for example, Schiepek & Schaub, 1989). In addition, Seidl (2007) has drawn on Luhmann's work to examine the effectiveness of governance codes and Knudsen (2005) analysed the development of the Danish healthcare system.

Habermas and Luhmann produced long and detailed critiques of each other's works (Habermas & Luhmann, 1973). Habermas criticised systems theory in terms of its methodological orientation with the view that systems theory tied to empirical-analytical procedures is inadequate as a research program (Holub, 1991). This reflects the emphasis on critical analysis, politics and participation as important elements in the

social research of Habermas. Luhmann saw practical problems with this approach:

> The well-known attempt of Jurgen Habermas to extend participation to all those who are concerned about and affected by decisions including even future generations, clearly overburdens the traditional machinery of democratic representation (Luhmann, 1996, p17).

There are critics and adherents of both camps. This thesis does not have space for a more detailed discussion of their mutual critiques.

A further criticism that is levelled at Luhmann's theory is that it does not explain the historical system-states from which the further autopoiesis proceeds.

> The concept of autopoiesis itself explains next to nothing, except this beginning with self-reference: an operation that possesses connectivity (Luhmann, 2006, p48).

This problem can be overcome to some extent by establishing the organisational context through internal documents and analysis of communication by organisational members, and is an aspect of the theoretical model that can be explored within this study.

The reticence of Luhmann to 'subjectify' the subject has earned him criticism in sociology (Hernes & Bakken, 2003).

> Individualists try to reduce the social to the actions and mental states of individuals, while collectivists argue that there is something irreducible about the social that cannot be expressed at the level of individuals. A commentator has recently observed that "it might be argued that Luhmann's systems theory represents the most radical attempt yet seen to exclude the human actor from any account of structure and system" (Hamilton 1996, p506).

Some of this criticism stems from separation of social and psychic systems discussed above. Luhmann (2002) states that mixing of the autopoiesis of the two systems never comes about, yet a high degree of co-evaluation and practiced reactivity does. However, perceptions

remain locked up in the activated mind and cannot be communicated. This does not mean to say that SST excludes human actors since they are central to communication. Individuals are relevant to society to the extent that they communicate and constitute the social system as an action system.

3.3 Summary

This chapter provides an overview of the selection of the two theoretical frameworks that provide the conceptual basis for two analytical frameworks, and their key elements. The use of different theoretical lenses has important benefits for the analysis of the implementation of risk management governance. There are two levels of interest. Firstly, how the HEFCE guidance is understood and implemented by organisation members, revealing how compliance with the normative requirements is achieved. Secondly, a broader view of the risk management implementation requires reflexive interpretations to reveal how risks are identified, what factors influence risk assessment and acceptability, and the role of uncertainty when participants attempt to predict future outcomes. The following chapter explains how both theories contribute to the study outputs within a Middle-Range Thinking paradigm and outlines the methodological choices made, ontological position and methods used to gather and analyse the accounts of risk and risk assessment and describes the benefits of using a case study to investigate organisational practices.

4 The Research Approach, Methodology and Methods

4.1 Introduction

This methodology chapter provides the epistemological perspective surrounding the theoretical frameworks outlined in the previous chapter. It explains the presuppositions about social reality that guide the selection of methods used in the case study, the theoretical, ethical and practical issues, and the appropriateness of the methods used to obtain the research data (Silverman, 2005). The first section provides an explanation of the study focus and states the research questions to be investigated in this case study. It goes on to explore ontology and introduces Middle-Range Thinking (Laughlin, 1995; 2004), outlining the principle characteristics of this methodological approach, and how it is used in this thesis. The second section describes the research process, including the case study design, data sources, narrative and document analysis, and the development of the analytical frameworks used. The chapter concludes with a reflexive consideration of data validity and research relevance.

4.2 Emergence of the Research Methodology

This research methodology evolved over the period of study from an initial positivistic approach following traditional case study methodology (Yin, 2003; Eisenhardt, 1989) reflecting prior beliefs associated with engineering and science. However, awareness developed of the ontological and epistemological problems associated with positivistic approaches that apply methods of scientific experimentation in studies of human actions. In contrast with 'hard' sciences, in which laws are developed through repeatable experiment and observations that are unified by theory, Social Sciences can only hope to achieve hermeneutic interpretation (or understanding) of a changing social world in which all knowledge is therefore contingent (Johnson, 2008).

Consequently, I began to question how to combine a structured approach to data gathering with a more interpretative analytical method and the methodological perspective shifted to a position that has been described as Middle-Range

Thinking (MRT) (Laughlin, 1995), and the way this perspective is adopted within this research approach is discussed later in this chapter.

This chapter explicates ontological, epistemological and methodological underpinnings of the research approach, with the aim of producing a consistent and coherent way of undertaking this empirical research (Laughlin, 2007).

4.2.1 Investigating the nature of risk

Academic studies illustrate the interactive and dynamic nature of risk that generates empirical patterns in relation to risk assessment in organisations; risk means different things to different people. An emphasis on reflexive understanding of risk favours qualitative techniques in preference to survey data, statistical analysis or quasi-experimental designs (such as those used in risk perception studies). Qualitative research emphasises an understanding of the issues being researched, including the social situation of those involved.

> …the study of the social world, which seeks to describe and analyse the culture and behaviour of humans and their groups from the point of view of those being studied (Bryman, 1988, p46).

In seeking to describe and interpret the world, qualitative research does not require researchers to strive for objectivity and distance themselves from research participants; sensitivity to subjective aspects of relationships with the research participants is an essential part of the research process (King, 1994). My three-year full-time involvement with the organisation and participants:

> … acknowledges the fact that culture needs to be understood in its context by those who have access to local practices, lived experiences, and shared meanings in that context (Soin & Scheytt, 2006, p66).

In addition, the interactive role of the researcher is an important aspect of the overall research design.

> Once the ontological and theory choice is made, it has implications for the assumed role of the observer/subjectivity in the resulting empirical engagement (Laughlin, 2004, p272).

The researcher-as-participant role necessitates reflexivity on the part of the researcher to recognise personal influences on the analytical interplay between narratives and theory.

Consequently, it is important to reflect upon my interaction with participants in developing an understanding of operational risk. Waddington (1994) suggests four possible categories of observer. Firstly, the complete participant operates covertly, concealing the intention to observe the setting, raising ethical concerns. Secondly, the participant-as-observer forms relationships and participates in activities, but makes no secret of intentions to observe events. Thirdly, the observer-as-participant, maintains only superficial contact with the people being studied. The final role is the complete observer, who stands back and eavesdrops on the proceedings. Since I was simultaneously a PhD student (not deliberately watching but immersed in University practices), a member of team of four producing recommendations on the implementation of risk management to the Principal's Central Team in the University and a training consultant during the four-year period of the study, the roles were complex. I participated in the interviews and workshop sessions, and consequently influenced the ensuing discussions. The trainees were aware of the data collection activity within the sessions, and I consider my role was participant-as-observer. However, relationships were complex since the type of participant varied in relation to interpretation by others. I could be viewed as a PhD student, a training consultant, using experience gained in industry, a compliance enforcer working on behalf of the Internal Audit Department, or any combination of the three.

From a reflexive point of view, some participants were interested in the research, and communication with the College Council, viewing me as a student, anticipating study outputs that would represent their perceptions.

Others focussed on the implementation of governance treating me as a management consultant, placing more emphasis on my experience and advice, with a consequent ability to shape their implementation of governance. Concerns about administrative load and integration with existing processes link to a compliance role, and participants took the opportunity to emphasise negative aspects of the framework and its implementation. In all cases, the narratives provide valuable and worthwhile perspectives, since the interpretation of my role represented a reflexive facet of their understanding of risk management and the governance.

I played multiple roles (Goffman, 1959) during participant interactions and, in addition, provided a conduit for feedback to Internal Audit on particular implementation issues, and in this role can be seen as a member of the compliance team, with similarities to 'action research' (Checkland, 1981). Three major concerns relating to action research have been proposed; uncontrollability, contingency[12] and subjectivity (Kock, 2004). As a student, there is little control and limited input to management decision-making, reducing subjectivity in relation to the type of change being instigated. Awareness of the contingent nature of organisations influenced the search for suitable theoretical frames, one focussing on normative aspects, while the other explores a social system that is changing and represented by multiple perspectives. Subjectivity is a perpetual difficulty that all social scientists have to wrestle with, regardless of the methodology adopted, emphasising the importance of reflection on explanations and adoption of prior theory to guide analysis towards less personalised interpretations.

A methodology seeking to change systems may improve things for one group at the expense of another, making it important to be clear about the motives behind the study and the potential 'winners' and 'losers'. The University intended to improve the effectiveness of risk management

[12] Contingency exists when future outcomes are uncertain.

implementation in their institution. I sought data that would contribute to significant findings, using representative accounts of participants; highlighting potential 'winners' and 'losers' in the narrative analysis.

The research combines a variety of data collection methods; document analysis, interviews and observations to access understandings of risk. The desire to study operational risk identification and assessment in a real life context, is informed by the nature of the subject under investigation and is reflected in methodological position, ontological beliefs and the theoretical viewpoints adopted.

4.2.2 Study Focus and Research Questions

This section outlines the aim of the case study in seeking to explore the questions that have been carefully chosen to investigate operational risk assessment in the HE context. In Phase 1 of the study, the research question remained broad and asked "What risks are identified by senior management in a University?". This exploratory phase enabled a preliminary analysis of the first stage interviews, providing input to inform the development of research questions used for Phase 2 of this study, including a reanalysis of the Phase 1 data. In addition, the managers were asked to identify organisational aims, to enable the link between aims and risks to be reviewed and confirmed.

The research questions that address the research problem in this thesis are presented below. The links between the questions, the literature and SST are summarised in Figure 4.1.

Research Question 1 asks 'How are operational risk assessments being carried out in the University?'.

Research Question 2 asks 'Does the organisational setting of the risk assessment affect the way it is conducted?'.

Research Question 3 asks ‘What is acceptable or tolerable risk to individuals in the University and what factors influence this understanding?’.

Research Question 4 asks ‘What uncertainties are apparent during risk assessment activities?’

Figure 4.1 below illustrates how the questions relate to key aspects of the Chapter 2 literature review and Social System Theory (SST) (Luhmann, 1995a) providing guidance for the structuring, investigation and analysis of interview, observation and workshop data. The DDE theory utilises the explanations developed using the SST lens to provide a normative assessment of the HEFCE risk governance in the cross case analysis, facilitated by the MRT approach adopted.

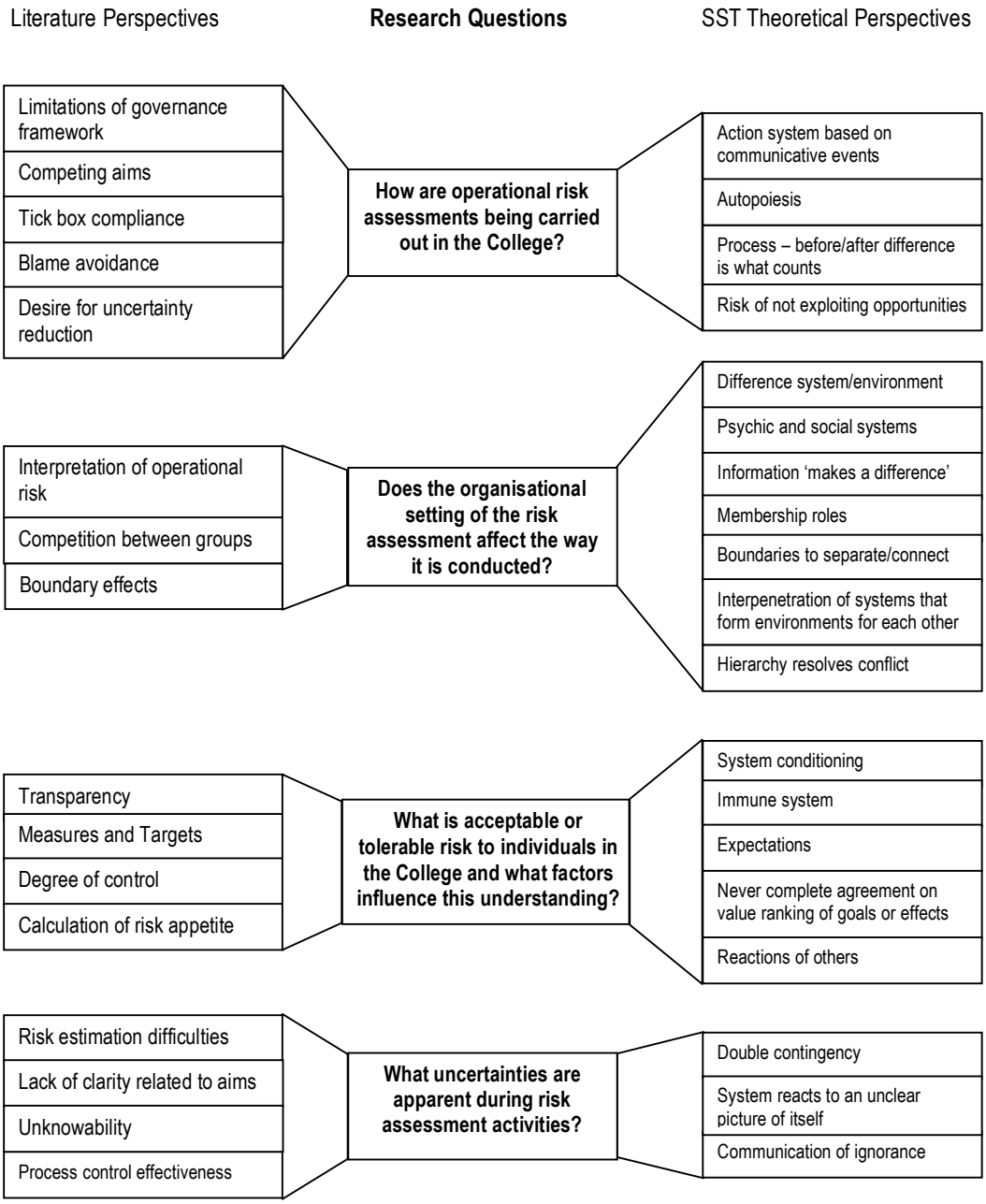


Figure 4.1 Enquiry Focus of Research Questions

The formulation of the questions was a key stage in the research process. They focus the identification of potential data sources and collection methods on those most appropriate to accessing empirics that can be expected to address the particular features of interest in the case, while also providing the framework for analysis in Chapters 5, 6 and 7. MRT facilitates the use of two theoretical frameworks as interpretative tools within a narrative analysis, providing the ability to normatively assess

implementation of governance, through accessing reflexive risk understandings within their contextualised organisational environment. The strength of the MRT approach is to encourage a structured approach to research, without mandating the structure, enabling the methodology to be tailored to the questions being investigated, while encouraging reflection on the researcher's role in the interpretations developed through narrative analysis. The questions guide research efforts towards study outputs that are valid, enabling this case study to draw conclusions in Chapter 8, to illustrate the significant contribution to the literature this thesis makes.

4.2.3 Beliefs underlying research approach

The initial beliefs influencing methodological selection were heavily dependent on the contingent nature of social systems, in which future outcomes are not solely dependent on organisational practices and decision-making, but are a product of unpredictable events in interacting networks of systems. The approach must draw the context of the organisation into the study as an integral part, implying a reliance on reflexive influences within the organisation in the interpretative frame.

The research approach accepts that there are 'real' risks and 'socially constructed' risks, both of which can pose threats to an organisation. The link between individual accounts and social action forms an important element of this approach.

> If men define situations as real, they are real in their consequences (Merton, 1995, quoting Thomas & Thomas, 1928, p572).

The beliefs underlying the research approach guide the methodology towards a critical analysis in the interplay between narratives and theory in a constructivist manner, within a limited real-life setting. This chapter describes the research strategy used to capture multiple realities, with each view adding richness to the overall picture, as exemplified in the film Rashomon (Director, Kurosawa, 1950).

> Just as it raises questions about the nature of truth, the film Rashomon illustrates the benefit of each approach to the idea of 'truth'. The viewer is bound to be left wondering which version of the terrible rape and murder is 'correct' and the film encourages the viewer to ask this question (Roth & Mehta, 2002, p 169).

The theoretical approach interprets all conflicting opinions as valid, when viewed from the perspective of the respective participants. This position is not well suited to positivist approaches to analysis in which true/false is an important distinction in relation to theoretical propositions. The descriptive approach can be extremely effective, as the McGovern campaign manager stated on a panel discussion:

> … the most accurate and least factual account of that campaign. (Frank Mankiewicz describing Fear and Loathing on the Campaign Trail '72 by Hunter S Thompson)

It is not important to establish whether comments are factual since the aim is to provide a rich description of what risk means to the research participants.

4.2.4 Ontology, Methodology and MRT

There are advantages to making deliberate theoretical and methodological choices before data collection, tailoring the research approach to successfully address the nature of the subject being investigated.

> … *all* empirical research will be partial, despite any truth claims to the contrary, and thus it would be better to be clear about the biases and exclusions before launching into the empirical detail (Laughlin, 1995, p65).

Since empirical research in organisations is only partial, and we cannot step outside the social world to study it, theoretical and methodological choices are made with or without acknowledgement.

> … the very idea that one can be a mere neutral recorder of the way others see the world is an impossibility. Like the proverbial monkey-on-the-back, theoretical presuppositions always come along for the ride (Jonsson & Mackintosh, 1997, p378).

In Laughlin's 1995 "Middle-Range Thinking" article, a review of the dominant schools of thought highlights distinctions between possible approaches to the study of social systems. These range from a positivistic world in which general patterns and unchanging truths are awaiting discovery, through a mid-position, in which "skeletal" generalisations are held possible, towards the extreme interpretative recognition of the contextualised and contingent nature of social systems, in which generalisations are not possible.

> … positions on these continua are assumptions, which leads to what is deemed to be 'understanding' (a less emotive word than 'facts'— constructed or otherwise) of an external reality by the community adhering to these assumptions (Laughlin, 2004, p264).

Laughlin's 1995 and 2004 papers argue a case for researchers adopting a mid-point in the ontological positions, on each of three continuums (theory, methodology and change), described as Middle-Range Thinking (MRT), illustrated in the following diagram.

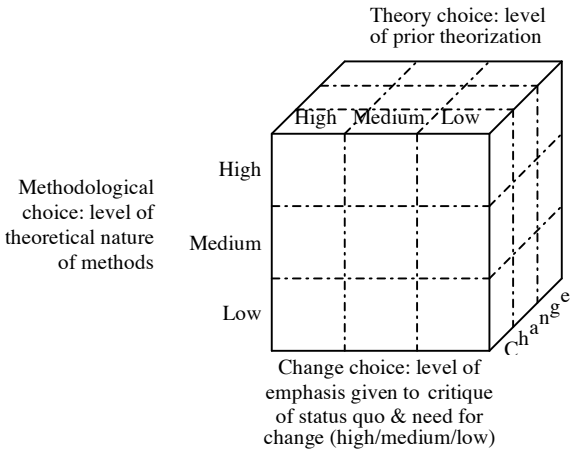


Figure 4.2 Dimensions on the Choice Process for Empirical Research
(Source: Laughlin (1995) Figure 1)

The figure illustrates choices to be made in developing a study approach and the possible positions in relation to theory, methodology and change emphasis. The ability to judge whether the resulting understanding

should lead to change or not and how to make this decision is described as key to MRT. As Laughlin (2004) observes, it is only after some level of understanding is achieved, under the assumptions that follow from the theory and methodology dimensions, that it is possible to decide what should be done about what is discovered. This study adopts the MRT notion of a stance that encourages change that is based on improved understandings.

The value of the MRT approach has been questioned. Lowe (2004) suggests that the choice of a middle position on the three dimensions amounts to nothing more than an assertion that this somehow avoids the 'problems' that can be found in other research approaches. He goes on to argue that we may be just as likely to be combining the worst elements of other approaches and that Laughlin's (1995) representation of theory, methodology and change choice, all a legitimate part of the research act, are somewhat contrived. The paper provoked a response from Laughlin (2004) that expands the choice framework, and sheds light on the reason for a novice researcher such as myself to find the framework valuable. In my struggle to piece together diverse research approaches into a coherent whole (Laughlin, 2004) the explicit consideration of the dimensions and my position in relation to each was an important stimulus to thinking more deeply about my research approach and brought clarity to a tangled web of theoretical and methodological choices.

Furthermore, one of the key aspects of MRT is to develop insights that are quite general in order to contribute to theory development (Teece, 2010), one of the aims of this study, embracing local meanings at one level, but through a reflexive lens providing broader interpretations of social systems.

> [MRT] provides an analytical framework that can be used to understand change processes in all organisations but does not either belittle the importance of the detail of these changing situations or is unnecessarily restrictive forcing the empirical detail into the theoretical categories (Broadbent & Laughlin, 2005, p9).

In this case, SST interacts with the data to form analytical frameworks to develop contextualised interpretations that form categories for empirical illustration of reflexive influences on risk assessment. The DDE analysis utilises these findings to focus on normative aspects of the recommended risk management model (HEFCE, 2001; 2005). The following table illustrates the research approach adopted in this case study, and how it utilises MRT in choice of methodology and methods.

	Middle-Range Thinking	**The Approach in This Study**
Theory characteristics		
Ontological belief	Skeletal generalizations possible	Skeletal generalizations possible
Role of theory	Skeletal theory with some broad understanding of relationships	Contextualise theory to develop broad understanding of relationships
Methodology characteristics		
Role of observer and human nature belief	Observer is important and always part of the process of discovery	Observer is important and participates in the process of discovery
Nature of method	Definable approach but subject to refinement in actual situations, invariably qualitative	Structured approach, subject to refinement in actual situations, including opportunistic data gathering, qualitative
Data sought	Longitudinal, case study based Heavily descriptive but also analytical	Little longitudinal data, case study based, emphasis on risk narratives in real life context Heavily descriptive but also analytical
Data collection methods	Documents, interviews, observation, questionnaires	University and Regulatory documents, semi-structured interviews, workshop observations and meeting observation
Data Analysis	Qualitative with prior theoretical terms and concepts evident	Qualitative, narrative rich, with prior theoretical terms and concepts evident, constructivist, multiple and conflicting perspectives valid
Conclusions derived	Reasonably conclusive tied to skeletal theory and empirical richness	Reasonably conclusive tied to skeletal theory and empirical richness
Validity criteria	Meanings: researchers and the researched	Meanings: researchers and the researched, accuracy and representativeness
Change characteristics	Medium emphasis, Open to radical change and maintenance of *status quo*	Reliant on research relevance Open to radical change

Table 4.1 MRT and Case Study Research Approach

Source: Adapted from Laughlin (1995, p80 and 2004, p272)

As outlined earlier, DDE and SST provide complementary frameworks for the analysis of governance implementation and risk interpretation in

societal systems. Mapping the elements of DDE (Figure 3.1) onto the HEFCE risk management framework extends the analytical capabilities of the DDE model to facilitate analysis of the recommended risk framework (see Figure 7.3). In addition, SST provides a skeletal framework for analysis and illustration of risk identification and analysis in organisations, building conceptual patterns that form the section headings for the narratives. The empirics allow both documented processes and narratives that form part of our constructed reality to flesh out these skeletal theories.

One of the strengths of MRT is the ability to combine prior theorisation and well-planned data collection, following traditional positivistic methods, with interpretative examination of a multiplicity of views by including participant perspectives without testing them for 'truth' or 'validity' and without a loss of research coherence. Conceptual frameworks resting on foundational theories have a powerful potential to amplify interpretations and seek out new ones (Dey, 2001).

The use of MRT has been inextricably linked to German Critical Thinking, and Habermas in particular, in the work of both Richard Laughlin and Jane Broadbent (Laughlin, 2004; Broadbent & Laughlin, 2005), building a framework of interpretative frames, design archetypes and sub-systems as heuristics to understand and identify the nature and order of organisational change. This framework has been utilised to study accounting change in different contexts including; changes in the NHS (Broadbent, Laughlin & Read, 1991); resistance to NPM in Schools and GP Practices (Broadbent & Laughlin, 1998) gender in accounting (Broadbent, 1998); unwanted changes in medical practice in the UK (Broadbent, Jacobs, Laughlin, 2001); and PFI (Broadbent & Laughlin, 2002). Some difficulties with the approach are evident in a study of accounting in the NHS by Broadbent (1992) illustrating fragmentation, with different members of the organisation holding different interpretive schemes (described as a schizoid organisation), furthermore the study noted that changes in interpretative schemes may be out of step with

design archetype development. Utilising the same skeletal framework, Soin (1996) expressed concern with the difficulty of defining interpretative frames and design archetypes coupled with an inability to explicitly draw power into the skeletal framework. A study of accounting and accountants utilising MRT (Richardson et al, 1996) also identified a weakness in the Habermasian framework developed by Laughlin & Broadbent in relation to hierarchy and power.

As emphasised by Laughlin (2004), MRT does not prescribe the theory to be adopted, but outlines the characteristics of a research approach that encourages the researcher to select appropriate prior theories for the topic being investigated. A study by Gurd (2008) illustrates the use of an alternative theory within MRT by incorporating structuration (Giddens, 1986).

My approach utilises two alternative theoretical frames, developing the emphasis on critical analysis. To understand this shift it is important to consider what constitutes a 'critical theory' (Chua, 2004). Critical theory rests on certain essential strands, elucidated by Geuss (1981). Firstly, critical theories are aimed at producing guides for human action that produce enlightenment and are inherently emancipating, reducing self-imposed coercion; secondly, critical theories have cognitive content and are forms of knowledge; finally, critical theories differ epistemologically from natural sciences and are reflective rather than objectifying.

> A critical theory, then, is a reflective theory which gives agents a kind of knowledge inherently productive of enlightenment and emancipation. (Chua, 2004, p259).

The use of a theory (SST) that incorporates reflexivity in the framework has significant advantages for fabrication of knowledge in this context, especially when accompanied by a more traditional systems analysis to establish normative aspects of the risk management model. A critique (Chua, 2004) suggests that the genesis of MRT from the work of Habermas is a red herring since the meaning of Laughlin's middle

derives solely from its 'spatial position' from the constructed alternatives and its derivation owes little to critical theory, inviting the use of different theoretical approaches within the MRT framework. To flesh out skeletal frameworks it is assumed that the skeleton is appropriate to understanding the setting and is not the wrong size or missing a limb and Gurd (2008) argues that Laughlin's MRT framework is insufficient to explain organisational change and has limitations that an alternative theory might overcome.

A further issue in MRT relates to the timing of prior theorisation. Laughlin (1995) proposes the adoption of skeletal theory before immersion in the empirical domain; this approach requires the researcher to be well-versed and immersed in critical theories (which I was not). It also suggests that no attempt is made to 'ground' (Glaser & Strauss, 1967) the theoretical foundations in the research findings (Dey, 2001). An alternative is for the researcher to ground theories in the data to flesh out theoretical frameworks, developing a critical narrative and then apply these conceptual frames and interrogate new explanations by returning to the empirical domain a second time (Jonsson & Macintosh, 1997). This research was undertaken using the latter approach, with an initial study stage to enable grounding to take place and inform the development of the research questions and theoretical frames for the analysis of data from both stages of the study.

A criticism in relation to the emphasis on change in MRT observes that the difference between 'change' and '*status quo'* assumes the existence of a unique reality within which it is easy to judge whether an organisation has 'changed' or remained the 'same' (Quattrone, 2004). This constructivist study accepts that social systems do not move from one clearly identifiable status to another, and the researcher cannot assume that changes observed are causally linked to an identifiable factor. Quattrone (2004) suggests that questions about whether one is for or against change are probably misleading, and this aspect of MRT is discussed later in this chapter when considering research relevance.

This section has outlined the key ontological and epistemological aspects of the case, and how MRT combines with selected theoretical frameworks to provide a critical and methodologically sound approach to the case.

4.2.5 Ethical Considerations

The University Research Ethics Committee approval is required for research involving human subjects and, having obtained consent to proceed, I accept responsibility for the ethical obligation to ensure there is no harm to participants (Crow, 2000). All individuals were asked to consent to their participation before interview or training. To gain 'informed' consent, an information sheet (Appendix 1) aims to build a shared understanding of what is involved.

> It is extremely difficult to present prospective participants with absolutely all the information that might be required to make an informed decision about their involvement (Bryman, 2004, p512).

Five elements are important: information, understanding, voluntariness, competence of potential participants and actual consent to participate (Kent, 2000). In this project, an aspect of informed consent that cannot be ignored is whether participation is voluntary.

> The boundary between tactical persuasion and duress is sometimes very fine and is probably easier to recognise in practice than to stipulate (Social Research Association, 2003).

Since the College's senior management were sponsoring the project, individuals may have felt obliged to participate. The information sheet emphasised that involvement was voluntary, and would stop at the request of the individual at any time during the project. Consequently, agreement to participate in the study is interpreted as 'informed consent'.

Obligations to the research subject include privacy, veracity and fidelity (Crow, 2000). Privacy may be difficult to achieve. The research

compares Departments and Schools, and the steering committee could guess the identities of those involved, despite the use of anonymity coding.

In addition, in this study, by making privileged data public, harm to the sponsor of the project is possible. Confidentiality was important to enable free access to information within the research site. To fulfil my obligations to the organisation, as to any research subject, research publications will take account of this concern and maintain anonymity as far as possible.

Overall, the project does not face substantial ethical concerns in comparison with the study of medical treatment or vulnerable (e.g. school children) groups. However, an awareness of the areas of concern is important to enable the research methods to minimize potential impacts on individuals, whilst maximizing opportunities to gather valuable information with the aim of knowledge production.

4.3 Case study approach

There is a considerable tradition of the use of single case studies in management and organisational analysis (e.g. Taylor, 1911, Bethlehem Steel Company; Mayo, 1945, The Hawthorne Studies; Selznick, 1945, TVA; Emery & Thorsrud, 1976, Norsk Hydro; Vaughan, 1996, Challenger launch failure). Case studies are the most appropriate methodology when contemporary events are being examined and are open to a number of different research strategies (Yin, 2003).

> As opposed to other qualitative or quantitative research strategies, such as grounded theory or surveys, there are virtually no specific requirements guiding case research. This is both the strength and the weakness of this approach. It is a strength because it allows tailoring the design and data collection procedures to the research questions. On the other hand, this approach has resulted in many poor case studies, leaving it open to criticism, especially from the quantitative field of research (Meyer, 2001, p329).

This research uses existing theory in a new context to interpret empirical findings; to generalise at the theory level, while the empirical data remains illustrative and contextual.

In this case study, the funding for the research is provided by the organisation that forms the unit for of study, therefore case study selection is pragmatic. The boundary is defined by the limits of the University. The project sponsor provided privileged access to organisational members over a three-year period and findings reflect the views of participants during that time.

A review of case study methods (Piekkari et al, 2009) confirms that Eisenhardt (1989) and Yin (2003) are the main authorities on the case study in business and management studies and have legitimized the use of case studies as a scientific method, providing researchers with specific guidelines for conducting rigorous case studies. There is an emphasis on proposition testing in their recommendations, such that statements of the type "if x, then y" or "the more of x, then the more of y," assume that important relationships have already been explored through the empirical work of others (Bourgeois, 1979). The lack of previous studies of operational risk within organisations, and particularly in this context, undermines this assumption. Furthermore, a critique of this approach suggests the value of case studies lies in their ability to produce particularized causal explanations for the observations produced by the case under investigation.

> The assumption here is that explanations must take context into account to be meaningful: Explanation is necessarily local and ‘‘historical’’ rather than law like (Piekkari et al, 2009).

Despite the largely positivist tradition of propositions and hypothesis testing to ensure validity of case studies, a number of good examples of case studies that utilise in-depth narrative analysis have been cited (Piekkari et al, 2009). This thesis combines the structured approach recommended by Yin (2003) with interpretative data analysis and presentation of findings.

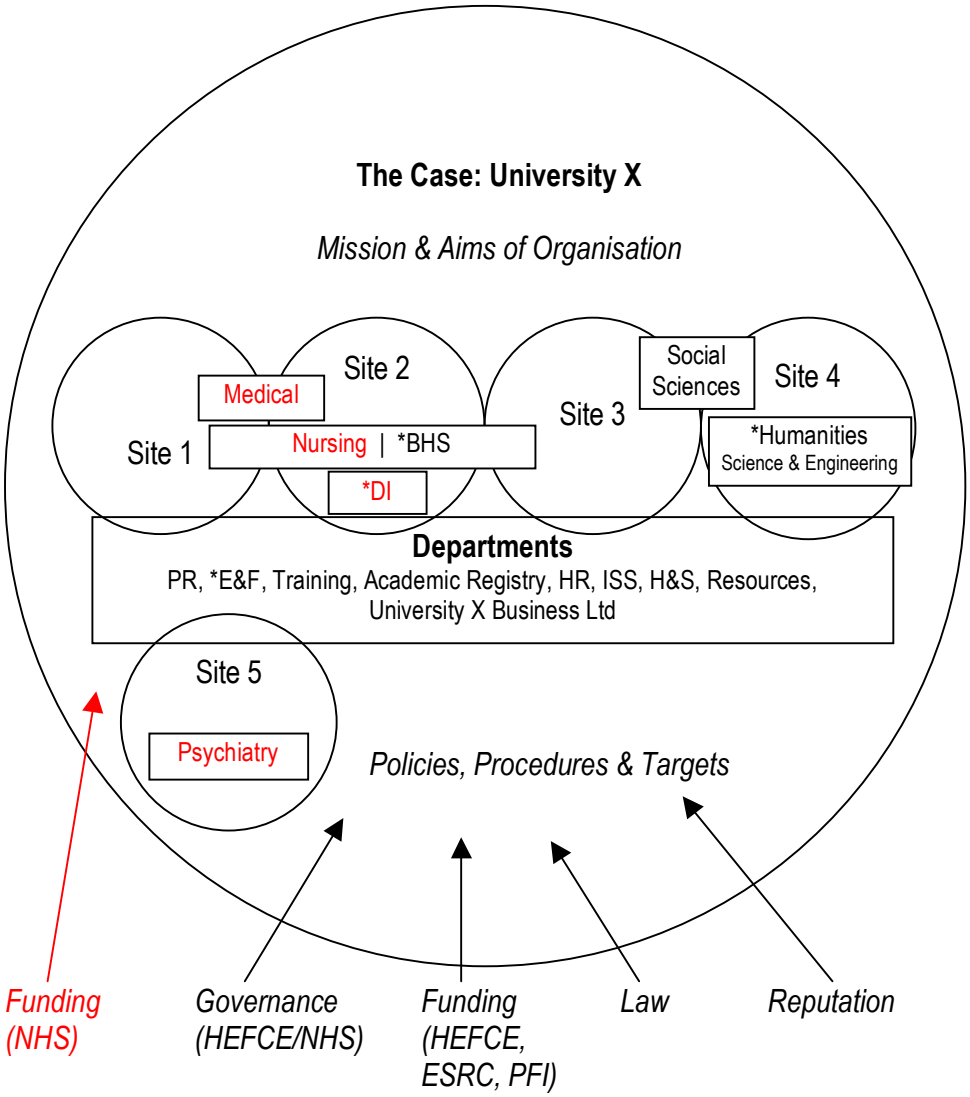
The selection of purposively sampled sub-groups within an overall case (embedded design) is recommended for case studies (Eisenhardt, 1989; Gibb-Dyer & Wilkins, 1991). In this study, the single study concerns the whole of the University; with empirical findings derived from whole group sampling for initial interviews, interacting with a second stage of selectively sampled embedded risk workshop cases and follow-up interviews, as illustrated in Figure 4.3. The embedded units are those Schools and Departments within the University selected for risk assessment workshops (selection criteria are discussed later in this chapter). This study relies on direct contact with organisational participants in real tasks and formal interviews, focusing upon their organisational contexts and narratives as researcher-as-participant (Parker, 2008). This strategy exploits the contextual nature of a case study and its strength in addressing contemporary phenomena in real-life contexts (Meyer, 2001), particularly the application of governance.

> The most effective analysis of the way organisations handle societal steering regulations is through detailed in-depth case studies due, largely, to the empirical detail that is needed to thoroughly understand the subtleties of organisational reactions (Laughlin, 2007, p286).

A case study is well suited to investigation of research questions that seek to understand how a contemporary set of events, such as the introduction of risk governance, is interpreted and enacted by participants.

4.3.1 Case Study Design

The case study design provided the structure within which to select and use the methods of data gathering, combining multiple data sources within the analysis. To frame the case study, Figure 4.3 conceptualises the case study organisation, illustrating relationships between internal groups and suggesting possible sources of risk.



*Selected workshop cases (see Table 4.4 for abbreviations used)

Figure 4.3 Schematic View of Case Study & Potential Sources of Risk

The data gathering was undertaken in two distinct stages from March to June 2005 and from January to May 2007. The design and linkage between the two stages is conceptualised in Figure 4.4 below.

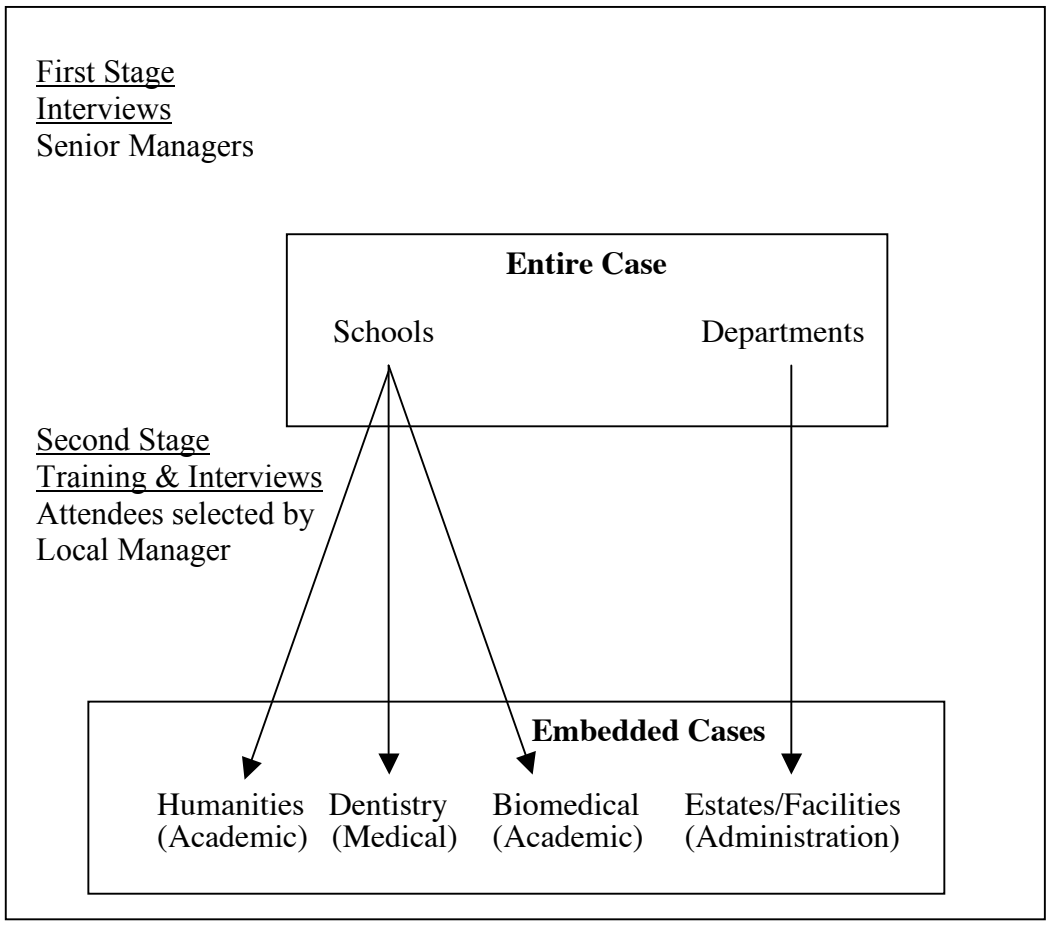


Figure 4.4 Research Design Overview

The study took a holistic approach within a limited setting, in which case wide views of risk interpretation provided the grounding to identify contrasting embedded cases to explore risk identification and assessment in different groups within the same organisation.

4.4 Case Study Documents

Internally published documents and web data at the University provided background information and the history of the case study institution. The University risk management documents made an important input to the study, representing the outputs of the formal implementation of risk governance. The risk management policy provided information about the allocation of responsibility within the organisation. The University Corporate Risk Register

constituted valuable data for comparing the formal risk assessment process outcomes with the views expressed during workshops and interviews. In addition, during the period of the study, there were two iterations of the risk register enabling comparison over time, providing an element of longitudinal study within the thesis findings.

The HEFCE risk management guidance was detailed in the literature review chapter, and provides the normative element for risk assessment processes being studied. Additional information about the implementation of risk management systems and the governance context was obtained by reviewing corporate documents from other organisations.

4.4.1 Case Study Data Sources

Table 4.2 details the types of data used and their sources.

Data Type	**Data Source**
Interview transcriptions	20 semi-structured interviews with Heads of School and Department
Interview transcriptions	12 semi-structured follow-up interviews with trainees
Training transcriptions	4 recorded workshop sessions
Feedback forms	Training attendees
Observation notes	1 management meeting
Document	University Risk Management Policy
Documents	University Corporate Risk Register (3 iterations)
Documents	Local Registers (2 iterations)
E-data	Websites: University, HEFCE, ESRC, Department of Health, Russell Group, Treasury

Table 4.2 Data Sources

4.5 The Research Process

To clarify the research process Table 4.3 illustrates the stages of the research that form the basis for this thesis. The study was undertaken full-time from October 2004 to September 2007, and on a part-time basis thereafter.

Date	Activity	Scope
Phase 1 of the Study		
December 2004	Draft interview protocol	The protocol outlines questions and prompts to elicit organisational aims and risk understandings using a semi-structured approach.
January 2005	Pilot interview	Pilot with Academic Manager to check interview protocol – only minor amendments needed
March to June 2005	Phase 1 interviews	Semi-structured interviews with Heads of 9 Schools and 11 Departments. The aim of these interviews is to produce a general overview of perceptions of risks in the different schools within the University.
March to July 2005	Transcription of interviews	All recorded interviews were transcribed verbatim, and sent to interviewees for validation. Very minor changes requested by 3 attendees.
July to August 2005	Phase 1 analysis	Content analysis of transcripts comparing descriptions of organisational aims and using risk categories identified by HEFCE (2001). This analysis provides initial confirmation of the link between organisational aims and operational risk, and lack of qualitative data surrounding these threats, providing input to the definition of the research questions for Phase 2 of this study.
August 2005	Narrative and Risk Register comparison	The collection of narratives was coincidental with the update of the 2005 local and corporate risk registers. The analysis provides insight into the formal process by identifying gaps and differences between the content of the risk registers and interviews.
September 2005	Preliminary Report	The Phase 1 findings were summarised and presented to the study steering committee.
Phase 2 of the Study		
October 2005 to December 2006	Thesis Development	• Phase 1 findings and preliminary literature review used to define Research Questions. • Literature Review Chapter drafted. • Development of Methodology. • Embedded Case Study selection • Selection of Phase 2 Theoretical Approach and development of analytical frameworks.
August 2006	Attend Internal Audit Risk Management Training	Investigations into the possibility of providing a resource for Internal Audit to deliver this training on their behalf, while gathering data during the workshop sessions.
September 2006	Pilot Study – Risk Management Training	Pilot delivered to a group studying risk, in which my supervisor worked. The trainer from Internal Audit attended to check that data collection would not compromise the training activity, and that my interpretation of the material was consistent with his. Permission to proceed granted. Feedback from the group of risk experts used to refine the training material, in agreement with Internal Audit.
December 2006 to March 2007	Schools and Departments Contacted to Arrange Training	All Schools and Departments contacted by letter to offer risk management training. None responded. Selected cases contacted by telephone, and agreed to proceed (Humanities, Biomedical & Health Sciences, Dental Institute and Estates & Facilities).
January to May 2007	Phase 2 Training Sessions	Training attendees selected by local management. The training comprised presentations of the risk management guidance provided by HEFCE (2001) with breaks for 2 workshop sessions. The first workshop asked participants to identify risks and the second built on this activity, assessing identified risks. Recorded data was derived from these workshop sessions.

January to May 2007	Analyse Feedback forms	Feedback forms analysed and copied to internal audit. Follow-up auditees identified and contacted.
January to June 2007	Phase 2 Follow Up Interviews	A course feedback form was used to gain agreement from participants for follow-up interviews (12 out of 20). The semi-structured interview investigates their perceptions of the workshop sessions. In addition, they were asked to identify the most serious threat to their group to enable comparison with risk register data and Phase 1 interviews.
February 2007	Observation of Dental Institute Executive Meeting	During the course of the risk management training, the Head of the School invited me to attend one of their planned executive meetings, to observe the inclusion of risk management in discussions, providing feedback to the group. I attended as participant-observer, and did not record the session, but used note taking instead.
January to June 2007	Transcription of workshops and interviews	Workshop audio recordings transcribed and cross-checked with filmed recordings to enable attribution of comments. All interviews transcribed verbatim.
August 2007	Narrative and Risk Register comparison	Workshop narratives compared with coincidental 2007 update of risk registers. This is a replication of the activity performed in August 2005, using 2007 data.
September 2007 to December 2007	Phase 2 data analysis	Content analysis of transcripts from Phase 1 and Phase 2 of the study. Analytical framework derived from SST and literature review used to identify and group narratives and to structure findings chapters for each phase. This was an iterative process with the analytical framework being adapted through interplay with the empirics. Once completed, the two datasets were integrated, and risk register data was added, to enable a cross-case comparison. Significant contributions to literature identified.
January 2008	MPhil to PhD Upgrade	Successful completion of the formal PhD process requirement
January 2008 to September 2009	Writing-up Thesis	Successive drafts reviewed and updated
September 2009	Thesis submission	Viva successfully completed February 2010. Examiners comments incorporated in final revision of thesis.

Table 4.3 Overview of Stages of the Study

The following sections outline in further detail these stages, following this sequence of events.

4.6 Phase 1 of the Research

This PhD formed part of a larger project, and in Phase 1, an interview protocol for the Phase 1 interviews was designed by four researchers working together to gather initial illustrative descriptions of organisational aims and risks. At this exploratory stage, the research question remained broad and asked "What risks are identified by senior management in a University?". The protocol was

designed to explore the range and type of risks identified by interviewees, and potential opportunities for follow-up research access (Appendix 2). It should be noted that questions 9 and 10 were not successful and elicited little data. A pilot interview was conducted with a willing Head of Department, within one of the Schools, by myself and another member of the team. The pilot confirmed the protocol elicited the type of data sought, requiring no major changes, and that the recording could be successfully transcribed.

Protocol design considers language and socio-cultural differences. I am familiar with hazard analysis, risk assessment and risk mitigation, but these terms may not mean anything to University staff generally. Consequently, the questions were designed to be as free from jargon as possible, and were revised using data from a pilot interview before the first stage of data collection. For example, the word 'risk' was replaced by 'threat' for those participants who did not appear to understand or respond to questions about risk. In addition, 'risk' can be interpreted narrowly to mean 'H&S risk', and the use of the phrase 'what threatens achievement of your aims' prompted interviewees to talk about broader concerns, to investigate the link between risk and objectives suggested by HEFCE.

The Phase 1 interviews started with very open questions, with prompts being used if the required information was not elicited. The participants were encouraged to give narrative responses, not yes/no answers.

> In the unstructured interview, rambling can be viewed as providing information because it reveals something about the interviewee's concerns (Bryman, 1988, p47).

Semi-structured interviews were preferred to questionnaires or structured interviews for both parts of the study. This predominantly open approach aims to obtain unexpected responses, providing greater understanding of issues from the participants' point of view (May, 2001). However, the use of some structure ensured that the interviews focussed on risks within the University. All interviews were tape-recorded enabling the interviewer(s) to concentrate on successfully covering the questions on the protocols (Appendices 2 & 7), with

the use of standard prompts where appropriate, and eliciting interviewee responses in the time frame allowed. Interview skills require the ability to be flexible, objective, empathic, persuasive and a good listener (Fontana & Frey, 2000). Following each interview, the interactions were reflected upon, building up contextual awareness in relation to each participant.

The list of participating groups is provided in Table 4.4 below.

Schools	Departments
Social Sciences	Public Relations (PR)
Humanities	Estates*
Sciences & Engineering	Facilities*
Health & Life Sciences*	University Secretary
Biochemistry* (BHS)	Training
Nursing (link to NHS)	Academic Registry
Psychiatry (link to NHS)	Human Resources (HR)
Dental (link to NHS) (DI)	Information Systems & Services (ISS)
Medicine (link to NHS)	Health & Safety
	Resources
	'University' Business Ltd[13]

* Adjacent groups merged after first stage of study

Table 4.4 University First Stage Data Collection Areas

The semi-structured interviews of Phase 1 of the research gather data from 9 Schools (one chose not to participate), and 11 functional Departments within the University[14]. The wide coverage was made possible by sampling only the Head of School or Department, gathering senior management views of risk across the University. Of the twenty interviews conducted, I was sole interviewer on four occasions and participated in a further 11, the remaining 5 were undertaken jointly by two other members of the University study team.

4.6.1 Transcription of Phase 1 interviews

I transcribed all recorded data verbatim, providing the benefit of familiarity and closeness to the data before analysis (Meyer, 2001). Any inaudible material was

[13] Name changed to maintain anonymity
[14] Two of the Schools and two Departments were merged during the period of study

marked [unclear] in the transcription. Narratives from interviews are verbatim transcriptions, except where hesitations such as 'um', 'er' 'you know', or word repetitions, were removed to improve readability. The department role function (Academic, Medical or Administration) was used to preserve anonymity, since to identify department would mean identifying an individual. To distinguish quoted academic texts from those of interviewees, transcribed comments from participants appear in italics.

4.6.2 First Stage Case Analysis

The analysis of the Phase 1 transcripts utilised content analysis to compare responses about organisational aims, and used identified risk categories to provide a preliminary overview of the data. Since few similar studies were available, a 'grounded theory' (Glaser & Strauss, 1967) approach was used to provide confirmation of the value of investigating operational risk assessment, and to develop appropriate research questions and inform the selection of theory.

In order to provide clarity and structure for comparison of data from different interviews, the initial framework for content analysis was derived from an illustrative list of risks for HEIs (Figure 2.2). The initial work to obtain valid empirical views from interviews involved transcription, re-reading transcriptions and continual listening to narratives, resulting in highlighted quotes with thematic codes assigned. Key word content analysis identified relevant narratives in the transcriptions and the patterns in the data began to emerge, as representative quotes were selected. This analytical framework did not provide a strong theoretical lens for understanding risk management processes, but fulfilled its role in confirming that there was a valid concern about the qualitative nature of operational risk through the link to organisational aims, and guided embedded case selection through identification of sub-goals within the organisation that present varying interpretations of risk between groups.

4.6.3 Phase 1 Narratives & 2005 Risk Register Analysis

To compare participant narratives and formal process outputs, the 2005 University risk registers provided a comparison with research narratives that were contemporary to their issue, illustrating differences between the formal documented process and narrative accounts of risk. These different data sources provided contrasting views of the formal risk management system and informal views of risk and risk assessment. The gaps and overlaps were evident. The absence of data on a topic is an important feature of this comparison.

4.6.4 Phase 1 Research Outputs

The initial analysis provided input to a preliminary report to the project steering committee, and the empirical data informed the definition of research questions and pointed to key features needed in a theoretical frame for second stage analysis. With little available prior theory or existing empirical evidence to draw on, this was a necessary first step in the case study.

4.7 Phase 2 Data Collection

As the study moved into the second phase, I began to work alone to investigate the research problem, defining the research questions, developing the methodology, and planning and undertaking the data gathering. The opportunity to record staff participating in risk identification and assessment discussions, whilst acting as trainer for the delivery of planned workshops, provided a serendipitous access method for gathering narratives about operational risk. I was invited to attend an Internal Audit risk management training session to familiarise myself with the course, with a view to acting as a resource for Internal Audit to deliver the training.

I acknowledge that this approach to accessing talk about risk was opportunistic rather than planned, since the training was being organised by Internal Audit and

required a resource. However, in acting as training consultant, there was a risk of bias when participants asked for guidance and clarification about requirements. Reflexively, this bias was difficult to guard against, but since the course material being presented was already designed and derived from HEFCE best practice guidance, personal influence was somewhat reduced.

4.7.1 Risk Training Workshop Pilot Study

Prior to commencing training a pilot study was undertaken to verify the appropriateness and practicality of the data collection method (see Appendix 3). The pilot session, held with members of the Risk Management Centre, enabled me to check my interpretation of the material with the person who developed the course, who attended the pilot training to provide feedback. Nonetheless, in subsequent sessions, I was careful to ensure that responses were consistent between groups, and clarified any unclear aspects with the Internal Audit department, providing e-mail feedback to participants subsequent to the training where required. The pilot confirmed the benefit of tailoring workshop presentations to focus on risks that were relevant to the group being trained, to encourage discussions as similar to a real risk assessment sessions as was possible.

4.7.2 Workshop Sample Selection

At the time of Phase 2 of the study, the introduction of local risk registers as part of an annual University risk review was accompanied by provision of risk management training for Schools and Departments (see slides in Appendix 4) providing an unusual and interesting opportunity to gather data.

The risk workshops came about by offering training to all Heads of Schools and Departments (memo dated November 2006, from the Head of Administration) to support the requested update of local risk registers. No Schools or Departments contacted me to ask for training.

Consequently, selectively sampled areas were contacted to arrange training sessions. The Departments and Schools visited during the initial stages of data collection form the candidates from which the embedded cases for risk management training were selected. Sampling enabled the study to investigate group risk accounts that theoretical perspectives suggested would vary, without expending the effort of data gathering in all groups. It was a pragmatic response to time constraints. Candidate cases for workshops were screened to ensure sufficient Department size to enable replication of the workshop sessions within each area. History, size, objectives, administrative systems, environment and individual traits are expected to influence reflexive systems. In addition, Handy (1993) notes that physical location can affect group interactions, and the study aimed to cover all major University sites. Three Schools and one support Department were identified, to provide data from widely differing groups within the organisation. The selection process considered influences suggested by the theoretical approach: site; nature of work; external links; use of H&S risk assessments; and history of the group. Consideration of these factors results in the selection of the Schools and Departments shown in Table 4.5.

School/ Department	Use of H&S Risk Assessment	Site	Nature of work	Theoretical Motivation for Selection
Dental Institute	Yes	Site 2 and some sites off campus	Academic NHS	Joint working with NHS, opportunity seeking (from initial interviews), history of successful mergers.
Biomedical & Health Sciences	Yes	Dual site, Sites 2 & 3	Academic Scientific	Reorganised with some course closure and loss of staff. Research focussed (from initial interviews).
Estates & Facilities[15]	Yes	Multiple site – campus wide	Support services	Group goals not directly related to key aims of teaching & research.
Humanities[16]	No	Site 4	Academic Non-Scientific	Long standing area, desk based study, research & teaching focus.

Table 4.5 Workshop Case Study Areas

These areas were contacted between December 2006 and March 2007, by letter and telephone. All groups contacted (Humanities, Estates & Facilities, Dentistry and Biomedical & Health Sciences) agreed to participate in the training programme and research study. One particular research question motivating the sampling asks whether the organisational setting of the risk assessment affects the way it is conducted. The study follows the advice of Yin (2003) in following replication, not sampling logic, with each case being chosen carefully, to shed light on the contextual influences. This strategy is an important aspect of the case study, while quantitative sampling concerns itself with representativeness; qualitative sampling seeks information richness and selects the cases purposefully rather than randomly (Crabtree and Miller 1992).

[15] Both Departments were included to provide sufficient numbers for repeat sampling, and during the course of the study they were integrated into one organisational unit.

[16] The School of Humanities agreed to participate, and selected senior academics to attend, but was unable to get more than one participant to join the Head of School and School Administrator on two suggested dates, so no sessions were held.

Having chosen the embedded cases, the selection of attendees must be addressed; the study cannot sample all members of each group.

> Even when the cases for a study have been chosen, it is often necessary to make further choices within each case to make the cases researchable (Meyer, 2001, p335).

In this study, the use of planned internal training sessions meant that the selection of attendees was dependent on School/Department nominations for training, and the voluntary attendance of the individual concerned. This revealed differences in approach regarding who should to be trained. Such choices act as proxy data for senior management perceptions of responsibility and accountability for risk management. Since I did not influence the composition of the groups, there was an additional benefit of observing organisational activity as it occurred. Seven training sessions were arranged and four were held, being dependent on availability of staff. The cancellation of planned training meant that no sessions were held in one of the selected areas; Humanities. The following section provides an overview of the nature of the groups that participated in the training workshops, and the roles of attendees, to allow the reader to contextualise narrative responses.

4.7.3 Embedded Case Study 1: The Dental Institute

The Dental Institute (DI) was based on Site 2 (Figure 4.3), with approximately 125 full-time and 80 part-time staff. There were 800 undergraduate and 260 post-graduate students in the School. The group had a history of organisational change through mergers with other Institutions. The arrangements within the Institute were very complex, in terms of who pays for what, with different income streams from the University and the NHS, which are constantly under review. The link with the NHS requires joint working arrangements.

> *Our staff all have duality of appointment, the College staff have all got honorary NHS appointments, and the NHS staff have college appointments, and everybody bears teaching, clinical*

service provision and some form of research with differing proportions. [T1A1 Academic/Manager]

Table 4.6 gives a summary of the training group profile.

Group Characteristics	The Environment
Training attendees: Professors & Senior Management Staff Aim: To be World Class Five previous mergers 260 PG & 800 UG students	Site 2 Hospital and laboratory sites Links to Health Organisations Complex inter-group relations

Table 4.6 Dental Institute Group Profile

The first training session was held here (T1), and the Head of School selected members of the Institute Executive Committee to attend. There were 5 trainees and 2 agreed to follow-up interviews. The Head of School requested that the risk training was tailored to consider risks associated with a merger, and did not consider it would be necessary to train any additional staff members in the area. Consequently, repeat sampling was not possible. Most representatives on the Executive Committee were senior academics with responsibility for management. The training group, with one exception, were familiar with H&S assessment, indicating acceptance of the administrative responsibilities of senior managers, in contrast to responses of interviewees in other academic areas.

4.7.4 Embedded Case Study 2: Estates & Facilities Department

The Estates & Facilities Departments (E&F) were merged during the course of the study, and were based at multiple sites, with responsibility for the entire estate, including Halls of Residence and Sports Grounds. There were over 350 staff in the group (80 from Estates). The Estates staff spent a lot of time managing external groups since most of the building work was actually done by outside consultants, agents or contractors. The Facilities group provided support services in buildings, including security, cleaning and administrative arrangements such as room bookings for Halls of Residence. In addition, they liaised

extensively with Ecovert, a PFI partner organisation providing subcontract support for facilities at some of the University academic sites.

Table 4.7 gives a summary of the training group profile.

Group Characteristics	The Environment
• Training attendees: Senior Management Staff • Aim: To provide infrastructure to support Research & Teaching • Integration of Estates and Facilities Departments • 350 Staff	• All sites • University, Halls of Residence and Sports Sites • Internal links to Schools and PCT • External links to legal compliance bodies, Ecovert and building subcontractors

Table 4.7 E&F Group Profile

Two training sessions were held (T2 & T3) in the E&F Department at their office at Site 2, and this group were responsible for all sites (Figure 4.3). The Head of Department nominated himself and senior managers in the group to attend. This was the only area in which two training sessions were held, and the same training material was used for both groups. It was tailored to focus on risks arising from compliance with 'green' legislation in relation to buildings. The same content was presented at both sessions. However, attendance in the first session was reduced to 3, because a flood resulted in a power cut in the West End, affecting one particular site, requiring staff to be elsewhere on the day. This limited the scope of discussion in that workshop, and suggests the need to have at least 5 attendees to enable exchange of views.

> *There were not enough people to have a real workshop. There were only 3 of us. [T2A3 Manager interview]*

The site closure dominated discussions in this group. One of the heuristics or biases identified in the field of cognitive psychology has been characterised as 'availability' (Slovic, 1987, Bazerman, 1994). An event is judged likely, or frequent, if instances of it are easy to imagine or recall. The biasing effects of memorability and imaginability pose a

barrier to open, objective discussions of risks (Barnes, 1984). Consequently, it is possible that this group overlooked other significant risks in their area, by focussing on the current problem. However, the opportunity to discuss issues associated with the incident was seen by participants as a beneficial exercise.

> *I think the most useful thing was applying them to the situation that was actually happening on that day, in the [name]. We had a live sample to look at. [T2A3 Manager interview]*

The second session had the expected attendance of 5 staff, with the addition of a member of staff from the Finance Department[17], who requested permission to join the training. This had the benefit of enabling comparison of views between groups, and highlighted the fact that assumptions about responsibility in relation to certain activities are not necessarily valid.

> *We always assumed, since there was no evidence of that process going on anywhere in Finance, I'd always assumed that that process went on in Estates somewhere. [T3 Manager]*

This raised the question of whether the HEFCE framework encourages the involvement of members of different groups in risk assessment sessions, and highlights one of the potential benefits of doing so. Of the 7 E&F attendees 5 were familiar with H&S risk assessment. The 5 follow-up interviews were conducted with staff from both training sessions.

4.7.5 Embedded Case Study 3: School of Biomedical & Health Sciences

This School was formed around the time of the first stage interviews, when the Biochemistry group and Health & Life Sciences group were merged. The School of Biomedical & Health Sciences (BHS) had about 120 academic staff, about 90 technical staff, 40 administrative staff and about 300 research staff. There were 2,100 undergraduate students and

[17] This attendee had to leave before the end of the session, and no feedback form or follow-up interview was completed

465 post-graduates within the School, making it one of the largest in the University.

The majority of the staff were based at Site 2, with additional research activity based at Site 3 and a small group at Site 1 (Figure 4.3). Despite becoming part of the Medical Schools, through reorganisation during this study, there was no suggestion that this group adopt joint working with the NHS, although some staff were based at NHS or Trust sites. Consequently the group was regarded by the researcher as an 'academic' group.

Table 4.8 gives a summary of the training group profile.

Group Characteristics	The Environment
• Training attendees: Technical Management Staff • Aim: High Quality Teaching and Research • Internal reorganisations, with some staff losses and department closures • 550 staff • 465 PG and 2100 UG students	• Sites 1, 2 and 3 • Hospital and laboratory sites • Internal links within department across sites • Interface with Health Organisations

Table 4.8 Biomedical & Health Sciences Group Profile

BHS nominated two groups to attend training. The first (T4) comprised 7 PhD qualified technical managers, and was attended by the 7 invited participants, 5 of whom agreed to follow-up interviews. The majority did not form part of the School's senior management team, and were not aware that a risk register existed before the training. Only 2 of these 7 attendees indicated prior awareness of H&S risk assessment on the feedback form. In liaison with a BHS administrative manager, it was agreed the session would focus on risks arising from the aim of excelling in a wide range of research subjects and taught courses. The second planned session for administrative managers was cancelled owing to other commitments.

4.7.6 Phase 2 Training Sessions

Training comprised a presentation (Appendix 4) outlining the HEFCE (2001) guidance, broken by two workshops, in which participants firstly identified risks, and secondly, assessed them. The training material was tailored prior to delivery, to focus on a particular risk identified by each Head of group, to facilitate realistic discussions. For these workshops, the voice data was initially transcribed and then cross-checked with video data, to attribute individual comments correctly, which was difficult using voice data alone. Nonetheless, it was not possible to attribute every comment, and where such data is used, only the session information is provided. Selected quotes were attributed to individuals through use of anonymity coding (Appendix 5). The approach enabled consideration of interactions between participants and whether certain individuals dominated some sessions (see Appendix 6).

To access risk understandings the researcher needs to establish cooperation and collaboration with organisational members (Burns, 2000) and the opportunity to be involved in risk management training represented a significant breakthrough for research access, particularly when the focus of interest is risk assessment. It also opens up the possibility of enlightenment through awareness of reflexive issues for the participants, as recommended within a critical theory approach.

4.7.7 Analysis of Feedback Forms

The forms (Appendix 7) were developed by Internal Audit to assess the quality of the training delivery, and 19 of 20 attendees completed the form. Around 95% of these rated the course as ‘Good’ or ‘Very Good’ (Appendix 8). Comments provided by 50% of participants indicated the training was helpful, useful or good, and no negative feedback was received. The forms also provided data about attendees, including role and familiarity with H&S (see Appendix 5).

4.7.8 Phase 2 Follow-Up Interviews

As a follow-up to the training sessions, I conducted short semi-structured interviews with all twelve of twenty participants who indicated willingness to participate on course feedback forms (Appendices 7 & 8). All training sessions provided some interviewees. The interview protocol (Appendix 9) was my own design, developed as part of the pilot research, and includes a question to check whether participants felt coerced during the workshops and links to the initial interviews by asking about most serious threat to the group, to enable an element of longitudinal research.

4.7.9 Observation of Dental Institute Executive Meeting

While providing risk management training, the Head of the Dental Institute invited me to attend their next Executive Meeting, to provide feedback to them about risk management activity that occurs normally in their existing management reviews. Reflexively, this indicates the group's business focus and their treatment of me as a free management consulting resource. During this meeting, my role was deliberately less participative, as the aim was to observe naturally occurring behaviour, as far as possible. I consider myself to play the observer-as-participant role, since I sat around the table with the meeting attendees. Despite having minimal interaction, I could not claim to be a complete observer, since my presence could lead to modifications in attendee communication and behaviour. This role has less influence on the participant discussions, since I made no verbal contribution to the meeting. I recorded a summary of topics in my meeting notes and gave feedback to the Head of School after the meeting, and provided a copy of my notes subsequently.

4.7.10 Transcription of Phase 2 workshops and interviews

The transcription method remained the same as that used in Phase 1 of the study. However, in this stage, the anonymity of individuals was

protected through assignment of codes to each participant, designating training session number and attendee number, in addition to role type (Appendix 5). This enabled group and speaker to be identified to interpret comments in their context.

4.8 Phase 2 Narratives and 2007 Risk Register Analysis

Phase 2 workshop and follow-up interviews were compared with the contemporaneous 2007 University risk register (a replication of the Phase 1 analysis). Once again, this illustrated differences between the formal documented risk register and participants' identification and assessment of risk.

4.9 Phase 2 Analytical Framework

This section details aspects of the analysis of narratives and how they were linked to the narrative categories that emerged during the data analysis. It is worth noting that the purpose of the risk rating scale used in the workshop was to foster group discussion about risk severity and frequency. Whilst risk scores and ratings produced during workshops could be tabulated, this reflected a very small sample that was not intended to represent a population (Morgan & Krueger, 1998), and such data was not analysed; the emphasis was on obtaining narrative data. Reflexively, this decision was fortunate since the workshop sessions revealed an unexpected reluctance to assign values to ratings; if the study had relied on analysis of this type of evidence, there would be little to discuss.

The headings used in chapters 5, 6 and 7 were derived from categories evident in the narratives when framed by the chosen theoretical lenses and informed by literature in the field. This was an iterative process, as I interacted with the data using theoretical perspectives to tease out interesting features of the case. The boundaries of the categories provided a focus for further definition, clarification and occasionally indicated a need for an additional focus.

The analysis also recognises that not only what individuals do in a group depends on the group context, but also that what happens in any group depends on the individuals who make it up (Morgan, 1997), and exposed aspects of this interplay in the workshop data. Quote selection represents the wide range of views elicited. When confidentiality prevented use of a quote, a descriptive paragraph was used in its place.

4.9.1 Analysis of Research Question 1

Question 1 asks:
How are operational risk assessments being carried out in the University?

SST forms the framework using autopoiesis as a concept to reveal how actions in social systems are stimulated by communicative events. The use of a reflexive framework as an interpretative tool enables identification of the way that participants identify risks, in both formal and informal systems. The details of processes in both types of control system were magnified and failure to identify opportunities formed an additional focus. The DDE framework facilitated normative assessment of the implementation of the recommended model utilising the empirics drawn out through SST perspectives.

4.9.2 Analysis of Research Question 2

Question 2 asks whether the organisational setting of the risk assessment affects the way it is conducted. The SST framework enabled the psychic/social system interaction to inform differences between groups and individuals and their environment. Narratives revealed how organisational members treat communication as 'information' that makes a difference in organisational contexts, or ignore it. In exploring membership roles, the boundaries that separate and connect highlighted the way that interpenetration of systems influenced reflexive responses in systems that form environments for each other. Furthermore, the framework explored hierarchy and ability to resolve conflict; an

important aspect of risk mitigation, through selection and prioritisation of actions.

4.9.3 Analysis of Research Question 3

Question 3 asks what is acceptable or tolerable risk to individuals in the University and what factors influence this understanding. The analysis of acceptable risk utilised the SST ability to explain why many long-term threats were ignored, through system conditioning, and how expectations and the development of immune systems influenced tolerability, alongside degree of control. Lack of agreement about value ranking of many risks can be linked to the roles explored in the previous section, and comes under the microscope as reactions to the reactions of other form a reflexive cycle in assessing the acceptability of risk.

4.9.4 Analysis of Research Question 4

Question 4 asks what uncertainties are apparent during risk assessment activities. The role of double contingency revealed uncertainties linked to the interpretation of external aims and how to satisfy them. Risk assessment activities were contextualised as reflexive reactions to unclear goals as the organisation reacts to an unclear picture of itself and interpenetrating systems. Uncertainty was also analysed in the context of a defensive mechanism, the communication of ignorance providing protection against uncertain outcomes.

Uncertainties about the effectiveness of internal control systems were evaluated to shed light on how poor internal control was identified, and to critically expose how risk concerns increased when participants were unsure about policies and processes.

4.9.5 Development of Narrative Discussion Framework

The interplay of SST theory with the research questions and the data is illustrated in Figure 4.5. The categories derived form the framework for the narrative findings that were informed by the theoretical perspectives outlined above and detailed in the previous chapter.

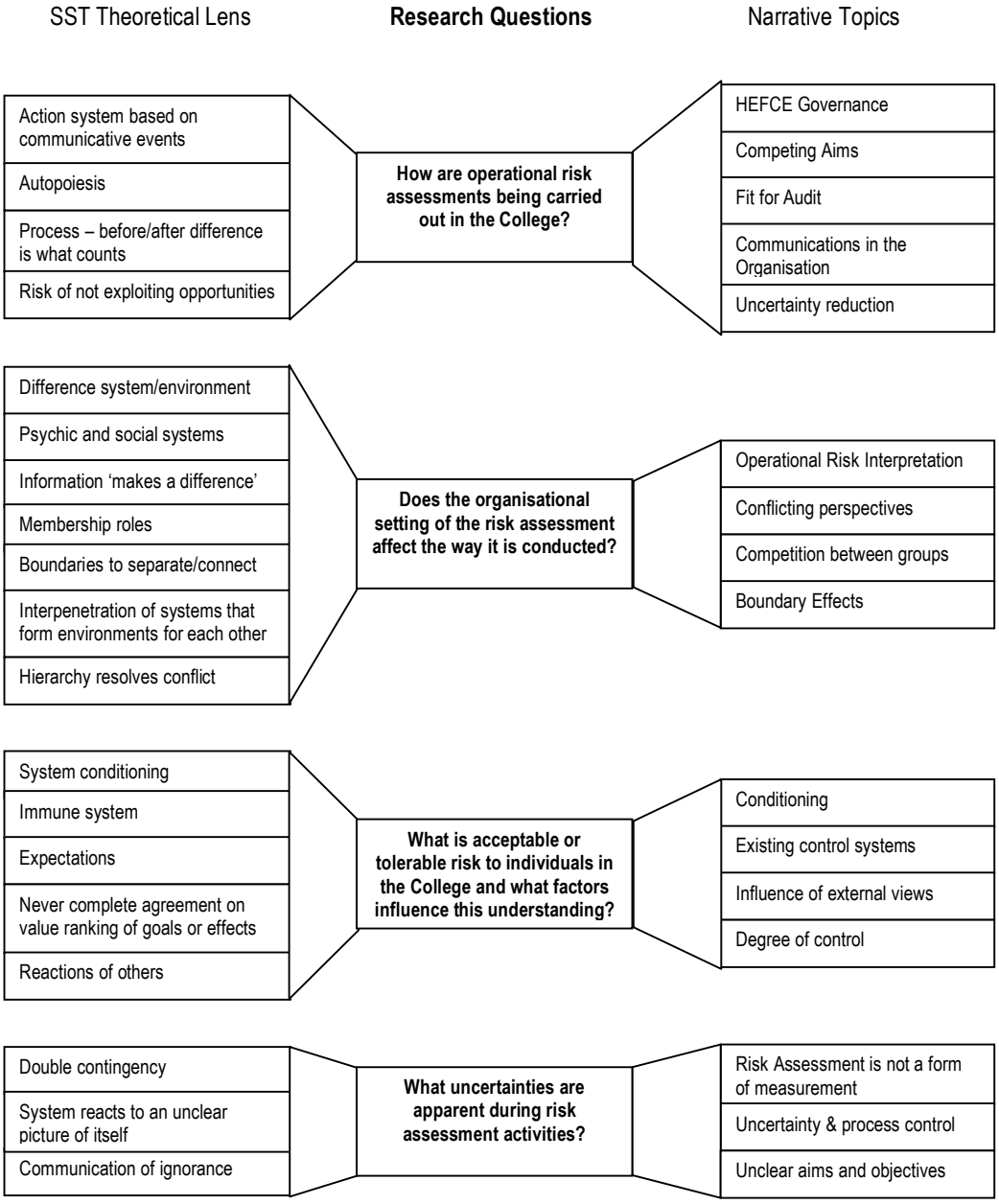


Figure 4.5 A Schematic Representation of the Interaction of the Theoretical Lens, Research Questions and Narrative Topics

The DDE model explores the normative risk assessment process, utilising empirical findings developed through SST analysis. The mapping of this theoretical frame is less complicated, and is illustrated in Figure 7.3. The two-layered theoretical approach in this case study was facilitated by MRT, through use of methods and theories that were appropriate to the questions being investigated. Selected prior theories reflect the researcher's beliefs and ontological position, aiming to provide transparency for readers and rigour in research findings recognising their influence on data presented.

Furthermore, the literature review provided an important input to the identification of research questions, and understandings developed during that process were inherently incorporated in the interpretations developed in the analysis. However, the analytical frame that provides the structure for the empirical findings did not explicitly draw the relevant literature into the presentation of narratives, thus requiring a further stage of analysis, drawing together the research findings to highlight their contribution to the development of knowledge in relation to the extant literature, presented in Chapter 8.

4.10 Reflections on Methodological Choices

In this case, the thesis integrates views from participants to provide a picture of a complex system from varying perspectives, building rich descriptions of multiple realities. This constructivist approach implies that knowledge is always knowledge that a person constructs, and multiple interpretations are open to construction (Larochelle & Bednarz, 1998). This epistemological position represents a break with empirical-realism that claims access to reality in terms of tangibles that are independent of observers, and my position leans further towards this perspective than is recommended within MRT as a middle position. In challenging the belief that the facts speak for themselves, problems are posed for a positivist approach to validity checking. However, MRT enabled theoretical structure interacting with narratives to increase the explanatory power of the interpretivist approach, creating understandings that contribute to

knowledge production. The privileged access over an extended period, provided a rich and complex set of data, from different sources, to shed light on operational risk in organisations more generally.

Furthermore, I wished to present a case that provides insights that readers recognise and will be able to interpret in new ways, penetrating their own understandings, described as an 'a-ha' moment.

> More than once we have had an "aha" experience when reading such [case] studies because the rich descriptions have unveiled the dynamics of the phenomena and have helped us identify similar dynamics in our own research or in our daily lives (Gibb-Dyer & Wilkins, 1991, p617).

The study aims to illustrate how the understanding inherent in the theoretical frameworks utilised here is of practical significance to the analysis of organisations. Both theories have been developed to align with the research questions being asked, to build understandings of theoretical constructs in unexplored domains. Narrative illustrations develop understanding of causal links to improve the predictive power of the theory. The empirical data interacted with the theories to extend the skeletal SST and DDE models as frameworks for analyzing key aspects of risk governance implementation and organisational change.

This methodology enabled critical assessment of differences in response to environmental stimuli in reflexive concerns of groups. Differences and similarities within and between individual views of risk were expected, and the study did not aim to privilege one view over another. In addition, expressed understanding of regulatory aims and compliance mechanisms was drawn-out and explored. Valuable new perspectives opened up through the linking of external environmental and self-referential systems, unravelling and explaining complex webs of meaning.

4.11 Cross Case Analysis

The data sets from both stages of the study were loaded into Excel and quotes organised around the emerging themes, the theoretical frame and research

questions. At this stage, the Phase 1 data was reviewed as a whole data set, while each workshop group remained separate as the embedded cases were explored in-depth. The next step was to integrate the Phase 2 findings to facilitate comparison between embedded cases. Reflecting the difference in approach to data gathering in the stages of this study, the initial interviews remain illustrated as a separate analytical section.

The cross-case analysis of the interview and training narratives draws both phases of the data collection together to examine the research questions in the light of the overall study findings. This involved organising themes and comparing these emergent findings against each other, starting to establish links for the findings to the relevant literature. The cross case analysis represents the unit of analysis for the study and pulls findings together for discussion to draw conclusions. It was at this stage that some generalisations at the theoretical level became possible as understandings of contextualised responses to environmental changes were developed.

Longitudinal change was examined by comparison of the replicated risk register analyses. Thus, the data from 2005 and 2007 were compared, highlighting gaps, similarities and features of the risk assessment process, providing an opportunity to examine changes in an ongoing and developing risk management implementation.

4.12 Validity & Research Relevance

In many research studies, validity is demonstrated by utilising triangulation of data from different sources. However, Searle (1999) argues that triangulation only makes sense from within a positivist framework. Triangulation has no relevance for genuine interpretivists, and would involve subscription to inappropriate ontological and epistemological positions in this case study. However, source triangulation is suggested when several participants say approximately the same things about the same issue (Baxter & Eyles, 1999) enabling common themes to be identified. For the study, the unit of analysis was the University, and cross-case data took the form of narratives from

workshops and interviews, and documents such as the University Corporate Risk Register, utilising theoretical perspectives.

> The idea behind cross-case searching tactics is to force investigators to go beyond initial impressions, especially through the use of structural and diverse lenses on the data (Meyer, 2001, p342).

The in-depth case study narratives develop internal validity through improved understanding of organisational processes and contexts.

> … qualitative data are particularly useful for understanding why or why not emergent relationships hold. When a relationship is supported, the qualitative data often provide a good understanding of the dynamics underlying the relationship, that is, the "why" of what is happening. This is crucial to the establishment of internal validity (Eisenhardt, 1989, p542).

The narratives act as clear illustrations of the how and why of risk management that current studies and literature have not captured in-depth. Such validity is founded on faithful reproduction of participant narratives (Christians, 2000), and that the transcribed narratives are representative of the range of views expressed in the interviews and workshops. A reflexive consideration of interactions with and between workshop participants is also important (see Appendix 6).

The issue of practical irrelevance of management research findings to practitioners has been the subject of discussion for quite a number of years and there have been considerable attempts to bridge the relevance gap (Rasche & Behman, 2009). The chosen topic must be relevant, either in terms of current interest or in terms of usefulness for research or business practices. The interplay between the rational design of risk management models and socially constructed realities makes the study of regulatory control systems, such as risk management governance, both challenging and interesting (Berry et al, 2009). The investigation of risk governance is an important current academic theme.

> Given the theoretical debates and sectoral differences about the meanings of governance, the environmental turbulence facing universities, the increasing complexity within universities, and the growing expectations for good governance practices and improved organizational performance, there is a growing need to reflect on governance (Bradshaw & Fredette, 2009, p125).

The usefulness of the study findings to practitioners is more difficult to assess.

> Relevance cannot be decided upon *prior* to application but rather, and most of all, is an *outcome* of application. Thus, a large part of the relevance problem in management studies is bound to the difficulty of controlling the context of application of scientific knowledge (Rasche & Behman, 2009, p249).

For the research to be relevant, it needs to be communicated and understood, emphasising the importance of this aspect of research to align with the change perspective of MRT. Participant narratives illustrated points embodying the perspectives of those implementing risk management in the study, enabling the academic and practitioner perspectives to interact and produce meaning that is potentially more accessible to either, encouraging interpretation by both management academics, regulators and practising managers. To use research for knowledge generation, the outputs need dissemination through research papers, seminars or books. Recommendations for the project sponsor summarise implementation concerns that emerge from this thesis and suggest possible local improvements in the application of the HEFCE risk management guidance (Appendix 10). Additionally, recommendations for the regulator, based on deeper understanding of risk management implementation, aim to offer critical insights that can improve HEFCE guidance (Appendix 11). Reflexively, my background as a management consultant placed emphasis on relevance to practitioners and regulatory bodies.

4.13 Summary

This chapter has traced the research process and explained ontological and methodological choices that influence the content of the study and methods used to gather and analyse the data, leading to a constructivist presentation of narratives. The reflexive approach encouraged by MRT enabled the researcher to find a balance between ethnographic focus on understanding and the critical focus on explanation (Dey, 2001) using a combination of positivistic approaches evident in the use of prior theory in the research design and structured data collection alongside interpretative techniques used in analysis and presentation of empirical findings. The researcher interacted with participant's narratives and

theoretical perspectives to develop interpretations of their views. Qualitative methods place reliance on building a complex and rich understanding of a research topic. This chapter also explained how I obtained and selected narrative quotes for inclusion within this thesis from the body of field data, developing theoretical categories reflexively through interaction with the data.

> One cannot ordinarily follow how a researcher got from 3,600 pages of field notes to the final conclusions, sprinkled with vivid quotes though they may be (Miles & Huberman, 1994, p16).

To facilitate this understanding, reflexive views in relation to methodology have been outlined and possible biases in the presentation of data made evident. In particular, selection of case study areas, data collection and subsequent analysis was elaborated. During the process outlined in this chapter, the adjustment from management consultant to academic researcher, via novice post-graduate, has not been easy.

> For those for whom the training comes mid-working life, an uncomfortable time may lie ahead, with conflicts abounding between the (research) centre's models and strictures concerning the ethics and practice of research and neophyte's common sense derived from the world of work and other experiences (Sanger, 1996, p9).

This hard won shift of perspective has enabled a structured empirical analysis of the regulatory environment in a University, exploring how the technologies of control are evident in organisational behaviour, in addition to revealing the problematic nature of risk itself, through critical interpretative analysis. This chapter has provided an overview of the chosen methodological approach. The following two chapters will present descriptive illustrations of the empirical findings, providing a valuable resource and illustrating key themes that emerge in the case.

5 Phase 1: Interview Findings

5.1 Introduction

This chapter presents semi-structured interview narratives to illustrate risk understandings of senior managers in the University. It begins with an analysis of the interpretation of organisational aims as described by the interviewees, conducted during Phase 1 of the study. Its initial purpose was an exploratory investigation of the definition of risk that links to organisational aims. Here, it provides an overview of differences in interpretation of aims that set the scene for the narratives that follow.

The remainder of this chapter presents the interview narratives as seen through the analytical framework built around key concepts of SST and incorporating perspectives derived from the literature review chapter. The main chapter headings relate to the four research questions, and within each section, the theoretical framework interplaying with the data led to the definition of the sub-section headings (see Figure 4.5).

Firstly, the 'How' of risk assessment utilises SST to examine the organisation as an action system based on communicative events through interpretation of the HEFCE governance and communication within the organisation. It investigates how autopoiesis influences responses to competing aims; explaining a preference for compliance process outcomes that are 'fit for audit'. The risk of not exploiting opportunities is illustrated, as the desire for uncertainty reduction comes into play.

Secondly, the organisational setting of the risk assessment is explored, utilising the notion of the interactivity of social and psychic systems to detect information that makes a difference, combined with membership roles and group boundaries. The role of hierarchy in resolving conflict and competition is also examined.

Thirdly, what constitutes acceptable or tolerable risk is explored, and through the perspectives of system conditioning, the role of expectations. Furthermore,

the inability to obtain complete agreement on the value ranking of goals, the influence of degree of control and awareness of the reactions of others illustrate the complexity of defining the risk appetite of the organisation.

Finally, the analysis explores the nature of uncertainty, encompassing unclear aims and how to achieve them, the difficulty of assessing the effectiveness of internal processes, a lack of statistical data and 'unknowability', to reveal that operational risk assessment is not a form of measurement.

The chapter sub-headings investigate different aspects of each research question, reflecting the influence of the data interplaying with the theoretical framework and illustrate the development of more complex understandings of the broad questions asked at the outset of the study.

This chapter identifies the interviewee in relation to group role, since identifying the School or Department would identify an individual. The categories assigned are based on the selection criteria for sub-groups chosen for the embedded case studies in Phase 2 of the study: Academic, Medical (i.e. working jointly with the NHS) and Administration, to enable functional comparisons to be made.

The aim of this chapter is to present the data in a logical and coherent manner that builds towards the cross-case analysis in chapter 7 of this thesis.

5.2 Aims of the University

This section provides a brief overview of interviewee interpretations of organisational aims, since it is postulated that failure to achieve aims replaces profit maximisation as a source of risk in public institutions (Hutter & Power, 2005; HEFCE, 2001). The interviewees' descriptions of the aims of the University revealed some differences between the objectives of the academic and administrative parts of the organisation. Administrative interviewees commonly referred to 'broad education' and 'service to society'.

> *I would have thought research, teaching, learning and the knowledge that it produces for some external good. [Administration]*

Academic respondents, who were more focussed on research and teaching excellence, less commonly mentioned this.

> *We have that dual mission, as does the rest of the college, to do research and to teach, and to do both at the highest level. [Medical]*

Figure 5.1 provides an illustration of the overlaps in the conceptualisation of aims. Numbers in brackets show the number of respondents in each category.

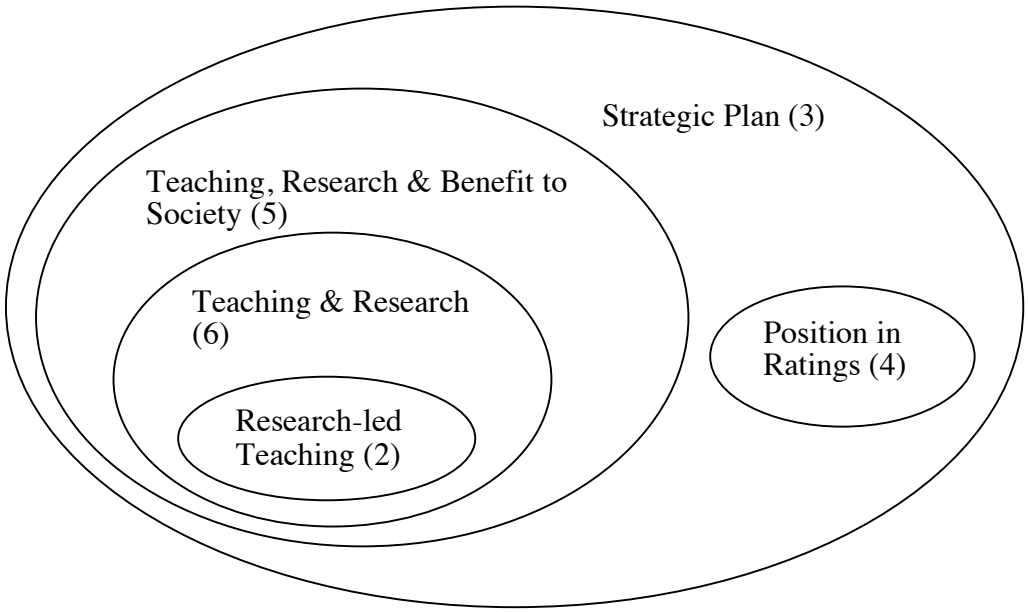


Figure 5.1 Overlaps in the Description of Aims

All respondents mentioned two or more stated aims of the college mission statement.

> [The University] is dedicated to the advancement of knowledge, learning and understanding in the service of society (University web page Jan 07).

The omission of 'service to society' by eight interviewees could relate to 'narrowing' (Propper &Wilson 2003) reflecting the current lack of measures in place to monitor this activity. In addition, the inclusion of external measures, such as position in ratings, provided an example of self-regulation, driving competitive responses through pseudo-market measures.

This brief overview of aims described by interviewees provides a background to the following sections that present the Phase 1 interview findings, enabling the reader to place operational risks in the context of contemporary organisational aims.

5.3 The 'How' of Risk Assessment

Research question 1 investigated how operational risk assessments were being carried out in the organisation, and this section explores both formal and informal risk management activities, to provide a window onto risk management as practiced in the University.

5.3.1 The Interpretation of HEFCE Governance

The Phase 1 interviews did not directly examine the implementation of risk management governance, but one interviewee illustrated how the potential financial impacts linked to HEFCE guidance provided a self-regulatory impetus for compliance.

> *My view of guidance from HEFCE is that, it's not really guidance, because even though they say 'if you don't do it, it won't affect your grant', that's what they say today, but you can be jolly sure that the likelihood is that if it's important, it will at some point. [Administration]*

The control of funds enforces self-regulation, and the potential for introduction of sanctions for non-compliance was sufficient to focus attention on regulatory guidance as 'information'.

5.3.2 Competing Aims

The interviews were more revealing about the need to establish priorities between competing aims. The increasing use of targets to measure the performance of the University was evident, creating drivers that were not necessarily related to the primary organisational aims of education or research.

> *The 'Trust', they are being driven increasingly by central government, their priorities are meeting expectations and targets. [Medical]*
>
> *The targets do not take much account of the need to educate for future generations. [Medical]*

In the Medical Schools, this resulted in a conflict of aims between NHS/Trust targets and RAE targets, requiring a balance to be achieved in order to satisfy both goals.

> *… we have, for example, a Health Services Research Department, which the Trust thinks is absolutely wonderful, which the Department of Health thinks is marvellous, but which the RAE reviewers were not that impressed by, and I don't know how we move forward with that. [Medical]*

For many areas, organisational links with external funding bodies entailed adherence to a mixture of regulations, both external and internal.

> *We have got a triple burden, because we have got NHS regulating us, we're caught between… we've got HEFCE regulating us and we've got the college regulations, so it's a triple whammy. [Medical]*

In addition, NPM introduced performance measures for funding bodies such as ESRC, which, in turn, translated into objectives for HE Institutions.

> The ESRC has encouraged the timely completion of thesis through the operation of submission rates, which incorporates a sanctions policy. The sanctions policy currently requires institutions to achieve an overall 'four-year' submission rate for its ESRC-recognised departments of 60 per cent. This policy has dramatically improved the ESRC's overall submission rate from less than 30 per cent in the early 1980s to its present level of 75 per cent (ESRC web site October 2007).

The target for PhD completion within 4 years was generally seen as being manageable and some viewed it positively.

> *Although in a sense it was driven by, what was seen as external pressures, like the need to hit Research Council targets, and so on, I think it's a wholly positive direction. It's mechanistically a good idea in terms of producing what we want to, which is successful PhDs, but what we've just been saying, I think is true,*

it is a better learning environment, and more supportive, and positive. [Academic]

The external target was considered, accepted, and even improved upon.

We try and finish all our PhDs in 3 years. Well, that's the goal we set, 3 years not 4 years. [Academic]

The adoption of University-wide processes, including regular supervisory meetings, formal 6 monthly reviews of PhD progress, and time limits for upgrades provided examples of change to support this goal.

We have noticed academic staff are better at ensuring that the forms are filled in, that has certainly improved in the last year or so, whether it is actually having any effect on the product is a debatable point. [Academic]

Two academic interviewees expressed concern that tighter timeframes might reduce the quality of PhD outputs.

I don't think it's just a matter of completing in four years; it's also having the quality product. [Academic]

I've certainly encountered people in some departments who say 'a decent PhD in my area cannot be done in under five years, and if I put people under pressure to complete in 3 or 4 they will be doing inferior work'. [Academic]

There was support for this view.

Some of the recent external examining I've done, the PhDs have been crap. [Academic]

When asked if they saw it as a problem if a student took 6 years to complete, one interviewee stated.

I would simply because you get punished. [Medical]

Satisfying the target became the primary aim (an autopoietic response), despite threatening the goal of high quality PhD theses.

Research and teaching quality were both perceived as vital to reputation.

People are always using the phrase 'research-led teaching'. [Academic]

However, interviews revealed that these aims compete for resources, resulting in tension between them.

> *There are all sorts of major threats to teaching success. I think the biggest is handling the threats to research/teaching interface. [Academic]*

The influence of funding and enforced self-regulation was evident.

> *If teaching quality and professionalisation of staff were as directly tied to T money as R money is to the RAE, no question, we would just do it. [Academic]*

The outcomes of the RAE were high risk/high benefit metrics, whilst the Quality Assurance Agency for Higher Education (QAA) assessment of teaching was accorded a lower priority.

> *While there is so much emphasis on the next RAE, all these new posts that we are desperate to put out, those are not in the direction of teaching; they were essentially research oriented posts, finding the mechanism to ensure that alongside this big push for research success, we don't throw out the teaching… [Academic]*

Although the interviews emphasised research excellence, to the detriment of teaching, teaching peer review and a move towards formal qualifications for HE lecturers within the University were evident.

> *In the end, it may be completely obligatory to ensure that all staff of every sort have got explicit qualifications, and I think that that bangs us up against a more old-fashioned perspective of what teaching is about. All aspects of this, both the qualification side of things and the idea of peer observation of teachers, and all that. It's usually the old fogies around who think, 'I've always done it like this, why not just let me get one with my teaching, and not be told how to do it, I've learnt on the job?'. I think it's a genuine culture change that they have to get used to, that we can't continue running like that, but quite how strong that will become, to apply pressure in political terms, from outside, I'm not sure. [Academic]*

Resistance to interference with teaching practices was recognised, requiring external pressure to enforce change. There were no other references to teaching assessment and qualification during the interviews, implying a lack of engagement with or support for these changes.

The need for space and time for research activities also poses problems when combined with teaching.

> *My personal view is that we are teaching too many undergraduates; because if you want to be excellent in teaching and research then you have to get your teaching load into proper balance with the research expectations that we've got; because if you don't, you're doing too much teaching, and there's no way you are going to deliver the research outcomes. [Administration]*

As student numbers increase, the workload for high volume courses, especially with the requirement for double marking, reduces availability of research time. In addition, some interviewees perceive an increase in needy students, related to 'widening participation'.

> *Now, you can't have a widening entry gate without any costs to the system because the more you expand that the more burden and toll we put on the internal staff to get people through and to keep the attrition rates relatively low. [Medical]*

Several interviewees are concerned about heavy workloads and high levels of stress.

> *I think there's a general sense around that academics feel themselves to be under stress. We do have some extremely good Departments, in terms of their research ratings, and they feel under a lot of pressure to retain or improve those ratings. [Academic]*

The stated ideal for academics is to teach and undertake research, and manage the associated administrative burdens. This problem was not solely the preserve of academics.

> *We've got such a lot on across a wide range of things that we try to tackle all at once, and that in itself creates risk. [Administration]*

In addition to risk management governance, other, non-academic, aims of the regulator compete for management attention. The HEFCE Pay & Modernisation initiative required job grading to be implemented across the University, with tight timescales.

A big cost risk as well as anything else about disaffected people, be it managers or staff, or whoever, it's actually quite tricky. [Administration]

The existence of sub-goals within research aims was also evident. RAE criteria favour certain types of academic research, based on the number of publications and prestige of peer-reviewed journals, in preference to applied research.

I think the metric that is most conspicuous by its absence but the most difficult to pin down, comes back to this particular part of our agenda, which is translational research. [Medical]

This highlights a conflict of aims between HEFCE objectives in relation to research excellence and knowledge transfer. Poor assessment outcomes can be the result, even when the organisation commissioning the research is very happy with the study outputs. The narratives indicated that applied research was not rated as highly as purely academic or theoretical work.

I have felt under pressure, there are all sorts of issues about the RAE, but you give equal weight to performance research, because there's a perception that the stuff that really counts is lab based, modern genetic research, and many of our people, who are the one's who really deliver the teaching, retain more clinical research. [Medical]

Schools have to decide whether this type of contract should be avoided in favour of less applied research, to improve RAE ratings. However, other factors were acknowledged as important.

So, of course, we want to do well in the RAE, but it mustn't be at the expense of everything else, because it is only part of the balancing act. [Medical]

All this regulation, and there is a lot of it, as you know, is all about a third of our expenditure. I mean [University] is a well over a £1 million, I mean we spend over £1 million a day, I always think of that, because it reminds me how big we are, but only a third of that comes from the government. [Administration]

RAE outcomes are very important in gaining central research funding, and maintaining academic reputation, but the University also needs to

satisfy customers who fund other research, so achieving this balance is a difficult compromise, since both are tightly linked to funding.

These narratives illustrate that aims and targets provided conflicting and competing sources of risk, and that the balance was tipped strongly in favour of compliance with governance measures that were clearly linked to funding.

5.3.3 Implementation is 'Fit for Audit'

The need to comply with transparency requests placed emphasis on how the organisation was assessed and audited, and was characterised as a game.

> *If you don't play the game, you get penalised. [Administration]*

> *If we don't play the game, the erosion of our core funding for teaching will go down. [Academic]*

One interviewee suggested that the regulator was aware of unintended outcomes associated with targets and measures.

> *They are going to not tell them how they are going to assess them, because performance management is driving indicator chasing. [Medical]*

However, the rules of the RAE game were difficult to bend or break.

> *That's the major difference in [University], that if you regard it as a game play, you know the rules of the game you are playing, it's a far less energetic prescription, so, there is a much wider range of viable game options, than there are in RAE terms. It's quite difficult to evade the rules of the game of RAE, and end up with the money. [Academic]*

Compliance required making systems auditable.

> *We are very much scrutinised. [Administration]*

This entailed providing evidence in a suitable form.

There is a whole bureaucratic process that goes with it, that is becoming a job in its own right. [Administration]

The transition to audit based compliance involved additional, and from an internal perspective, unnecessary paperwork.

I don't have a problem with accountability, I think that's absolutely fine, it's just sometimes you have to employ another person to do that, but then, that's the same everywhere. [Administration]

These changes were seen to be widespread. The influence of NPM caused reflexive anxiety ahead of external assessments, and internal systems for demonstrating due diligence were required.

I think we've got the policies and procedures, I hope we have, where I worry is the audit. [Administration]

The development of bureaucratic routines to satisfy transparency demands eased reflexive concerns since the paperwork was in the drawer in the event of an external assessment.

5.3.4 Communication in the Organisation

The theoretical focus on communication in social systems encourages a focus on this aspect of the organisation. There was general agreement that internal communications were poor.

I've often thought that the information flow is good as far down as the College Committee. [Administration]

The interviewee elaborated.

Between the Principal's Central Team and the College Committee, the communications are fine. I've got a feeling that, rather than being a conduit, it's a terminus. [Administration]

Another observed a weakness in internal communications.

We could do a lot more to tighten up the way in which we are informed. [Administration]

This view was confirmed specifically in relation to risk awareness.

> *I don't think there is anything that has come down from what is now [name]; let's call it the centre in general, over the past 20 years that has given any indication of the risks whatsoever. Most of the things have been picked up from outside. [Academic]*

The comment implied that the interviewee interprets this as an indication that the University is not genuinely concerned about risk management. The external environment was recognised as a source of information in relation to risks. Another individual illustrated the lack of feedback in relation to risks flagged within the University.

> *I raised this with the College Council a few years ago, and it caused a little bit of a ripple at the time, but I don't know what has happened after that. [Administration]*

No response represented a communication and reflexive interpretation reduced the incentive for action and future communication on the topic.

Communication also included availability of records for reference. Training records were considered a risk in relation to H&S. In the event of an incident, it may be impossible to provide evidence that an individual has received the appropriate training.

> *The risk to the individual, obviously, there is not sufficient safety training going on. The essential risk there, and this probably has been a risk to [University], because if we had a major accident here, and if the H&S executive said 'right, let's have a look at your records' I mean, I'm not an expert in this area, but I have a strong feeling that would be a problem. [Administration]*

This comment also illustrated awareness that some risks pose different threats at the individual and organisational level.

Lack of formal communication structures can lead to reliance on individual relationships to access information and get things done.

> *My ability to do my job is very dependent on my personal relationship with the principal. [Administration]*

The senior managers described internal communication and feedback as poor, and it is reasonable to suppose this situation worsens for those

lower in the organisation's hierarchy, making aims difficult to interpret and hampering implementation of initiatives.

5.3.5 Uncertainty Reduction

A desire to reduce uncertainty is associated with the internalisation of risk associated with decisions. Interviews provided an example of organisational ability to improve chances of achieving an aim by making the target wider. In this case, a project management plan with a modular work programme.

> *Once the project budget is set, the project budget is set. We have to have a strategy, if there is something comes out of the woodwork, we've got to take something out, and you could say that's the effective value and risk management. [Administration]*

This approach reduced risk in relation to the aim of compliance with budgeted spend, as a response to control of budgets. Planned spend was monitored against actual spend, but was unlikely to check progress against the schedule of works, so the approach ensured compliance with target spend, but did not ensure the completion of all planned work for which the budget was agreed. Since unexpected overspends are always unpopular in organisations, the senior management may consider this a useful approach to control of estates expenditure. However, while uncertainty about budgeted cost has been reduced, the cost for completion of the overall programme of works had increased.

Use of external resources was a method of reducing internal liability.

> *We're actually using an outside agency to vet all our contractors. [Administration]*

The interviewee indicated that uncertainties associated with sub-contract arrangements were reduced by placing responsibility for checks elsewhere. If something subsequently goes wrong, such practices help to justify the decision.

5.4 Influence of Organisational Group

Research question 2 investigated whether the setting of the assessment affected the way it was conducted and this section explores aspects of operational risk assessment that shed light on similarities and differences between organisational groups.

5.4.1 Interpretation of operational risk assessment

The HEFCE guidance (2001) recommends assessment of operational risks, utilising likelihood and severity to produce a risk score, enabling the organisation to prioritise risks. Some interviewees recognised the wide range of risks the organisation faces.

> *I think if you were to look at what we actually do 90% of it is risk management, one way or another. [Administration]*

The organisation recognised risks without the use of a risk assessment.

> *I would say there isn't necessarily a formal risk assessment process. [Administration]*

> *I think if you asked most of the staff in my department they wouldn't see that as risk analysis or risk management, it's continual improvement, but they know that's what's expected of them. [Administration]*

The lack of local use of the risk register was clear.

> *I suppose the real test, let's be quite honest, would be what happens if we have to actually look at the risk register and see what the disaster plan is for any particular thing. [Administration]*

So, risk management was associated with resolving problems after an event.

> *I don't know how HEFCE define risk management, but my working life consists, to varying degrees of crisis management. [Administration]*

The use of the term risk led to confusion with H&S assessments.

If you asked a lot of people in that building, talked about risk, they wouldn't think about academic risk, it would be, 'am I being exposed to carcinogens?'. [Academic]

In most Schools, the responsibility for H&S was delegated to an administrative member of staff.

H&S, they tend to be the administrators. [Academic]

Specialist experts took responsibility for H&S (Hutter, 2005).

[We have] an individual responsible for H&S, and he's very active, he's got certification and so on. [Administration]

The term 'risk' was associated with H&S, with which academics were not concerned. The issue of academic and administrative division of responsibility was illustrated in the following description.

The idea is that administrators do as much as they can in terms of work load, also, if its an administrative thing, they do it, academics don't have to, but, of course, there's a limit to that, so there are tensions when other people think academics should be doing things, which ... so it's difficult. [Academic Administrator]

Academics resented the intrusion of managerial approaches in the University.

Professors don't like that sort of thing, they are not used to it, they are used to, kind of, govern themselves. [Medical]

Whilst academics believe they should govern themselves, narratives provide evidence of reluctance to take on managerial and administrative roles (Dearlove, 1998b).

The guidance states a desire to improve opportunity taking. The need for operational risk to encompass more than risk reduction was recognised by one interviewee.

If I do everything through risk management, I think I would come across as being too cautious, reactive rather than what I really ought to be doing, is being pro-active, a bit more entrepreneurial. Clearly in being that way, I must assess the risk, no omelette without cracking eggs, and we need to take some risks to get where we want to go. [Medical]

This statement illustrated an interpretation that places responsibility with senior managers, as part of the strategic decision-making process, but was not the common interpretation in the narratives.

5.4.2 Conflicting Perspectives

The interaction of social and psychic systems results in different interpretations of the same risk. The achievement of the recruitment of planned student numbers posed different types of risk to Schools. In some, the availability of the desired quality of students was limited.

> *There is always danger that you take people who, frankly, may not quite be in the category of excellence that you would, of course, want. [Medical]*

By contrast, over-recruitment could result in overcrowded lectures, and more work for teaching staff, without any additional teaching funds.

> *We have a different problem, the 'A' level grade inflation means that you are over-recruiting because everyone over-succeeds. [Medical]*

There were tight timescale issues in relation to these targets, increasing the difficulty of achieving the stated aim. In addition, the Health related disciplines have NHS recruitment targets translated into internal targets.

> *Essentially, you have to engage in a kind of form of Olga Korbut-like gymnastics in order to be able to squeeze your quotas and your selection procedures, and manage and manipulate those, so that you can actually make those targets. [Medical]*

There were different perspectives between and within Schools.

> *I think in some Schools, the balance between a School view and a Departmental view is quite different; the dynamic is quite different. [Academic]*

Research Management Advisory Group (RMAG) played an important role in preparing Schools for external Research Assessments, ensuring that ratings were maximised. These reviews resulted in mixed feedback. Some interviewees perceived the process in a negative way.

> *Some think the RMAG has been punitive, I don't think they see it as being a facilitative device at all, it creates very much, a kind of 'us and them' mentality, and that's maybe partly as to how it's managed. [Medical]*

Another felt the ineffectual process risked increasing staff disaffection.

> *(We) had to go through the process again, of justifying our existence, and saying how we would do better in the RAE and producing all the documentation and we never had an official response, it was completely unsatisfactory. [Academic]*

However, another thought it reduced risk by sharpening research focus.

> *…research, we're getting stronger all the time, with RMAG, and the research assessment exercise that has been introduced by HEFCE over the last 20 years has certainly strengthened colleges like [University]. [Academic]*

The interviewee that had been through mergers and reorganisations was more familiar with, and open to, change.

> *It's interesting that the schools that have moved the most are the schools that have actually been involved with the mergers that we've been through. [Administration]*

For the interviewees from Schools where little has changed for a long period, conditioning suggests that proposed changes are unnecessary, since it has worked that way for many years, and the system has endured.

These examples illustrate differing opinions about aims and processes resulting from interpretative variance between groups within the University.

5.4.3 Competition between Groups

Competition brings additional facets of organisations into play, those relating to power and access to financial resources.

> *One of the reasons that I'm not very happy with the current system is that it is almost setting research and teaching against one another. [Medical]*

Managing the teaching/research interface represented a serious problem.

> *I don't want warfare to break out, there's too much at risk. [Academic]*

The introduction of a divisional structure, with matrix management to enable access to teaching staff, was viewed as a potential threat.

> *The problems about the line management of academics being through research divisions, … a consequent problem is how does your head of a teaching programme, of all the teaching programmes have any muscle to say 'you will do a course on my programme'. [Academic]*

Competition between groups was evident.

> *It's a mistake to give those people too much power. [Academic]*

Academics wanted control and influence within the organisation.

> *One needs to have the Heads of School with reasonable authority. [Academic]*

Others agreed academic focus was essential.

> *We have to decide as an institution, we are an academic institution, what are the drivers, and if you come up with an answer other than academic, then let's go home, because we are not here for the benefit of the accountants. [Administration]*

However, unsuitability of academics for the management role was cited as the reason that others have authority.

> *The criticism has been that finance runs the college, and this is why; in the absence of strong academic management, someone's got to run the college. [Administration]*

Nonetheless, the narratives show academic aims win the competition against estates and infrastructure investments for access to resources.

One interviewee expressed a general concern about lack of IT investment.

> *There is a risk, a more fundamental risk in my view, and that is, as an institution, we don't invest enough in IT systems, compared with our competitors. [Administration]*

Provision of IT support was a concern across the University.

> *IT support itself is obviously an issue, as it is for anybody else. [Administration]*

Investment in IT infrastructure and support was not directly related to the aims of teaching and research, and it was accorded a lower priority in budget allocation, particularly in relation to research funding. This same emphasis was evident in relation to poor buildings on some sites, including halls of residence, with the use of basement rooms for teaching. There were competing demands for the limited space.

> *It's always difficult because of the fight for space, academic space, teaching space, research spaces, then there's support services. [Administration]*

Lack of maintenance was cited as a threat in relation to attracting and retaining both staff and students. There was a negative impact on commercial dealings.

> *We have to interact with people from industry and from investors, and finance community. When they come for a meeting here it immediately sends out a message 'they have no money so we can get hold of whatever it is we need to do quite cheaply'. It actually puts you on the back foot when you negotiate, and perception is very important. [Administration]*

However, spending remained focused on investment to improve academic standing.

> *It's all gone into academic staff, and academic initiatives, there isn't a single penny gone into the infrastructure this first year and it's all meant to be for the structure. [Administration]*

The organisation must find ways of balancing competing perspectives in different groups, and emphasised those identified with most financial benefit or loss, identified as RAE research performance.

5.4.4 Boundary Effects

The Follett Review (Follett & Paulson-Ellis, 2001) made a number of recommendations regarding appraisal, disciplinary and reporting

arrangements for senior clinical academic staff. A key principle is joint working to integrate separate responsibilities requiring interaction across the organisational boundaries. However, this demands additional resource levels and paperwork for joint reviews.

> *Joint appraisals, you're sitting through half of it and you're not really desperately interested in the details of the clinical role of the individuals. I'm interested in, for example, how they are getting on with their research and papers being published, but the NHS person is not really interested in that at all, very much, but then we will find sometimes where the NHS commitments are actually seriously interfering with their ability to research and I do become very interested. So, there is definitely a gain there but there's definitely a problem in the lack of equal interest in every aspect of the appraisal. It's a very banal thing, actually, you are wasting time, you are getting 3 people together. [Medical]*

It was recognised by the interviewee that joint responsibility made integration important in preventing some issues falling into a gap between the NHS and the University, but entails duplication of work.

> *There are some issues where, incident reports, sometimes you find you have to report it 2 or 3 times. [Medical]*

The boundary can act as an irritant and barrier.

> *IT treats NHS staff who provide our teaching as non-standard accounts, which means that they have to renew annually even though they've been teaching for 25 or 30 odd years. [Medical]*

Internal boundaries were evident, and assumptions were made about other group functions and roles.

> *There are issues, I think, about where responsibilities begin and end, and about what people think happens. [Administration]*

> *This campus doesn't have a very good connection with the rest of the empire, so we don't have the support that you have necessarily at [site names] or whatever. [Administration]*

Unfounded assumptions can increase risk to the organisation.

> *It was something that we hadn't anticipated would happen, and if we'd been asked, we would have probably thought that there was a mirror image. [Administration]*

When data was lost it emerged that there was no backup. Two interviewees express lack of understanding about the functional split of IT into two groups.

> *Somehow, technical support is separated from ISS, which is something I can't understand [Administration]*

> *I think the college's support for IT could be much more effective than it currently is, because as you know, it's split between the Computing Centre, which is part of ISS, and Management Information Services in the Department of Resources, and they do have, what seems to me sometimes to be conflicting priorities. [Administration]*

Departmental boundaries were interpreted as a barrier, with different sub-goals apparent to others. The internal organisational boundaries exhibit both overlaps and under-laps, with dual processes and gaps in responsibility.

5.5 Acceptable Risk

This section will examine the factors that influence whether risks are acceptable to individuals, groups and the organisation as a whole and to investigate the idea of a 'risk appetite'.

5.5.1 Conditioned Expectations

An 'immune system' enables organisation members to ignore many potential risks, by default they are acceptable. For example, pre-RAE poaching has been experienced in the past, as those individuals with good publication records were tempted to join another university, whose RAE rating was thereby improved.

> *Well, two years before the RAE, of course, there are some retention issues everywhere ... [Academic]*

The loss of staff in this way was not presented as a threat, but rather as a normal operational problem. Similarly, another interviewee illustrated that funding cuts are not a threat if they are routinely expected.

> *This is the first year ever since I've been in here, 12 years that we have not had a cut in the unit funding of students. So, is it a threat? Well, no. Why? Because we expect it. [Administration]*

However, some risks that were faced regularly could be ignored.

> *It's a risk that you can become immune after a period of time. [Administration]*

Theft was a regular problem at most sites, since access was unrestricted.

> *Like every other Department, we have been subject to theft. There was one on this floor, some months ago, and things like laptops were stolen. [Administration]*

The majority of incidents were considered opportunistic. One successful risk reduction measure was cited.

> *An attempt was made to break in, but was foiled by the steel doors; they got through the outer conventional wooden framed doors. [Administration]*

The majority of interviewees felt that sensible precautions by individuals to protect property remained preferable to the introduction of controlled access to sites, which was viewed as impractical and undesirable.

> *Express college policy is not to utilise card control during the day, with 20,000 students. [Administration]*

Narratives suggest resistance to the use of swipe card control amongst academics, discussed in Section 6.4.1.

One research concern present on the risk register was associated with the achievement of planned grants, and the associated funding balance, with some contracts providing full overhead recovery, and others not.

> *Academics are not applying for the right sorts of grants, and/or are not winning the right kind of grants, so there is an issue of portfolio. [Administration]*

A lack of academic focus on finance was implied, reflecting role conditioning.

> *A risk for the college is that its academics are not engaged enough, or understand the importance of what, I suppose, we term the 'enterprise agenda'. [Administration]*

This has resulted in the need to financially support research by other means.

> *We subsidise it by people working additional hours, academics doing secretarial tasks, and all the rest of it, and the building falling apart. [Medical]*

The problem was mitigated by existing working practices that prevented the shortfall being evident.

Transparency requests focused attention on data integrity (grants, RAE data, students).

> *It has been the constant cry of a number of academics over a number of years: 'the data is wrong'. [Administration]*

One academic confirmed HEFCE (2007/11) concern about the validity of accountability data.

> *The college figures are just complete nonsense, you don't rely on them, they're a bad indicator of virtually everything. [Academic]*

In many areas, separate databases were maintained, as central data was not trusted, resulting in duplication of effort and a question of which data is 'right'.

> *I would always check anything like that with the School office, who, I think, are more on top of that kind of data than the central data systems. [Academic]*

The lack of confidence in the validity of data in the University provided an additional source of risk. One interviewee stated that if such data was used to calculate PhD completions within 4 years, Schools could fail to achieve targets because agreed deferments were not included in the centralised data; leading to unnecessarily poor outcomes in relation to the target measure. In addition, statutory returns (e.g., student numbers)

based on unreliable data could result in infringements of the reporting requirements.

> *For 15 years since I've been here, I've always wanted to press a button, and see what our student numbers are, and I can't do it still. [Academic]*

The risk could have an impact on both reputation and finance should the University be accused of fraudulent reporting student of numbers. This risk appears to have penetrated the conditioning that the narratives above reveal, since it has been identified for action (at a meeting, not using a risk register) and the MyUniversity database has been designed with the intention of improving data reliability.

Data storage and backup remained major concerns in some parts of the University.

> *Data management generally is a very high risk, and I have to say, when I arrived here, I was surprised at the lack of administrative systems and data capture systems. [Administration]*

The University sites were geographically separate and multi-site access remained difficult.

> *It's so annoying that we can't access data wherever you go, and so one of the things that we're looking at is secure, that's the rub, is a secure way of having a data repository where you can access your important information. [Administration]*

Some IT functions were not available at all sites.

> *We don't have access to certain things like MyUniversity at the moment, or the Research Gateway. [Medical]*

Many interviewees found the e-mail system slow and unreliable.

> *I find my e-mail system very frustrating a lot of the time. [Academic]*

My role as a student within the University provided many examples of this view during the 3-year study period, not only during interviews, but also from staff and students in normal day-to-day activities. The routine

types of risk associated with slow networks, lack of backup facilities and poor e-mail performance were not included in risk registers; Schools and Departments accepted these as normal. Catastrophic failure of IT servers was, by contrast, a recognised corporate risk.

Seven floods have occurred across the sites in recent years. Conditioning acts to focus attention on things that can be recalled.

> *I think you have to consider flood, but it was, it seemed remote, but once it's happened, it's no longer remote. [Administration]*

The majority of these incidents were perceived to be a result of lack of funding for maintenance.

> *... always a risk of the buildings in this place, floods and things like that, I put that under risk management, but I wouldn't put it under affecting the School achieving its objectives, other than in the short-term, although I do think that not having good buildings has a detrimental effect. [Academic]*

Poor maintenance illustrated two levels of concern and control; unexpected malfunctions causing disruption were expected and acceptable; vague notions of long-term negative outcomes were ignored. The effect of conditioning was evident in awareness of common problems, if they are usual, then communication on the topic was not treated as 'information', the risk was tolerable. Furthermore, risks not encountered previously were also ignored in risk identification activities.

5.5.2 Existing Management Control Systems

Many existing organisational structures and control systems act as risk management systems and this section includes descriptions of these activities, highlighting the existence of informal risk management, but not recognised as such by participants.

> *We don't have a risk management committee per se, but a lot of what we do is institutional, a lot of our management is thinking ahead and seeing risk issues and putting in place arrangements to minimise risk. [Medical]*

In the academic areas, traditional controls included admission, exam and marking processes. Recent initiatives to reduce risk were also evident, e.g, the RAE had triggered internal RMAG reviews as a preparation for external inspection of research quality, and PhD completion targets were managed through the widespread implementation of a formal review and upgrade process and the establishment of a Graduate School.

> *We were congratulated, by the central teaching committee, for many of our processes, and we're very process driven. [Medical]*

The narratives reflected increased managerialism associated with NPM. One of the associated problems was the addition of layers of protective record keeping.

> *We are likely to over-bureaucratise ourselves, in that what we end up doing, under each of these situations, is learning from a past problem and we invent a new form, a new rule, a new signature that solves that one problem, but doesn't make sense to the system as a whole. [Medical]*

The long-established Health and Safety (H&S) management controls received a mixed review. Two interviewees were concerned about it; seven others did not perceive it as a major risk, either because of the system in place or because of the low-level of risk in the area concerned.

> *I think that there is a variable approach to H&S amongst management. [Administration]*

Estates spending allocation was influenced by the need to ensure areas comply with H&S law.

> *It doesn't address any of the business critical, it just keeps the principal or the teacher out of jail, so it doesn't keep the business going. [Administration]*

There were different H&S regimes within the University, and the interviewees suggested that those areas that were not solely office based had formal systems and risk assessment procedures in place to reduce risks to acceptable levels.

Plagiarism was considered to have increased with the advent of internet, and was often easy to spot, but, even so, required effort on the part of teaching staff to take formal action.

> *One runs into problems because almost nobody ever gets failed outright, even in the most outrageous cases of plagiarism, because the college is scared of litigation. So, they tend to be allow to re-sit at a later stage, and that's demoralising for the academic staff, because they think 'well, why should we bother, if they're just going to be allowed to get away with it?' [Academic]*

There was a perceived lack of effectiveness of the formal plagiarism process, in terms of punishment to deter others, providing little incentive for academics to continue to report incidents.

The process to protect Intellectual Property Rights (IPR) was considered ineffective, and a payment of £35,000 to a student to recover IPR was cited. Academics were often unaware of the need to protect their work and the problem was exacerbated by the lack of funding for patents.

> *It's up to the individuals to identify and we're actually at that position now, so we have some data that isn't patented but there's two industrial concerns that are interested in it. [Academic]*

The increased emphasis on IPR within the University reflected pressures to adopt commercial approaches to their activities. The establishment of 'University' Business Ltd provided academics with support in relation to IPR, patents and contract management. This structural organisational change was not triggered by the formal risk management system.

There were control systems in place to ensure compliance with legislative requirements. In some parts of the University, it was a major task to remain abreast of current legislation.

> *There's a whole raft of legislative risks, which of course, increase week by week. [Administration]*

The recent introduction of the Freedom of Information Act (2000) caused some concern in relation to animal rights.

> *I have grave concerns that the Freedom of Information Act will allow the animal rights movement greater information about our experiments with animals and quite possibly could involve the college in protests and threats that could threaten its very existence. [Administration]*

As NPM seeks to make public bodies more transparent in their operations, it increases the secondary risk of damage to reputation through disclosure of information. In contrast, the Data Protection Act was not perceived to pose a risk to the University, except in relation to workload, as an additional administrative task to be managed.

An example of change in the legal environment, linked to an increased threat of terrorist activity in London, was the requirement for security of some hazardous materials, requiring existing management control systems to be modified. The responsibility for ensuring safe storage of particular restricted chemicals was unclear at the time of the preliminary interviews, but training data confirmed such controls had been implemented, once again, without the use of a risk register to identify the risk. Most risk management activity within the organisation has nothing to do with the formal risk management policy; it is embodied in existing management controls and successful delegation of responsibility to individuals, who undertake their 'duty of care' to reduce risks to an acceptable level.

5.5.3 Influence of External Views about Risks

The increase in external targets, league tables, a perceived increase in litigation and the implementation of governance produces a complex web of external oversight. Transparency increases the importance of measures that provide a simplified view of organisations.

> *The problem is that if these league tables counteract our reputation, they can also enhance it, but they are not very scientifically based. [Administration]*

A suggestion of using of aptitude tests to replace uninformative inflated 'A' levels for student selection revealed how league tables influence decision-making.

> *Now, from an academic point of view, that's the right answer, but from a league table point of view, that's a problem. [Administration]*

The organisation cannot ignore these external reports.

> *Of course, everybody says 'oh, you don't want to listen to league tables' which is fine, if you're at the top, and I think the Principal is quite happy with where we are in terms of league tables, although he does bang on about quite of lot of them. [Administration]*

External reports indicated that more post-graduates were needed in most Schools.

> *If you look in the league tables in the Russell Group for post-graduate numbers, I think you'll find that [University] as a whole is underperforming relative to Russell Group competitors. [Medical]*

Internal goals were linked to league table and statistical performance in competition with other universities. These goals aimed to reduce these risks to acceptable levels.

Some interpretations of external views of risk resulted in risk avoidance, as individuals and groups attempted to avoid culpability for risks.

> *If people don't understand what Freedom of Information and Data Protection means, then they perhaps feel constrained in what they do. I would hate to think that academic colleagues are, for example, not putting challenging ideas in front of their students because they are worried that the students might think, 'oh, are you allowed to say those sort of things'. [Administration]*

In addition, e-mails did not mention individuals' names.

> *You even try to avoid naming people, you sort of adopt bizarre cryptic references to, 'do you remember the person we were talking about yesterday, well, do you realise they've now gone and …' [Medical]*

This approach was seen to be necessary.

> *We clearly need to have a culture of being a little bit more careful what we say in e-mails, about whom, to who, etc. [Medical]*

The concern related to available evidence and blame.

> *It's not always a good idea to have e-mails going back, there is always the problem of being compromised, it could be better that they are not there. [Medical]*

Additionally, this was reflected in an unwillingness to provide references that say anything about the student. The marking of course work and examinations has also been affected, with some areas recommending no comments on submitted papers, perceived to facilitate disagreement by the student in the case of a formal complaint.

Reflecting the transition to private sector practices, students were described as customers or consumers (Gabriel, 2005), and their expectations could be difficult to match.

> *When they pay over the money, they think they are buying a result and not a service. [Administration]*

Customer focus was evident in changes triggered by student feedback.

> *It will show that we respond to customers. [Administration]*

NPM has increased the market orientation.

> *The place must become run, like other universities, much more on a business footing, and much more sense of the consumers and the market. [Medical]*

The introduction of 'top-up' fees was seen as likely to increase student expectations.

> *We will expect students who are already quite demanding, in terms of quality and service, to be even more demanding of quality and service. [Academic]*

Failure to deliver what was promised may result in student complaints or litigation.

> *These characters will have a much sharper sense of what represents value for money. [Administration]*

Consequently, there has been an increase in student appeals in recent years.

> *I think what we are seeing is the tip of the iceberg. As recently as 2 years ago there were no appeals against our admissions decisions at all, and the numbers are still small but they are growing. There are now appeals against decisions to do with student progress, student examinations, and we've not had any appeal that was based on poor teaching yet, but it's a matter of time. Some other institutions have, I know some institutions who have paid out quite huge sums of money, like £30,000, to a student, because they've admitted poor teaching. [Administration]*

This risk entailed financial penalties and indirect financial loss through damage to reputation if a complaint was upheld.

> *Our reputation is to an extent the source of our income. [Administration]*

However, reputation was difficult to control or influence and understand.

> *I know colleagues in other schools find this, that quite often [name] will be perceived from outside as better, but quite why it is … [Academic]*

Historical control systems for managing reputation were viewed critically.

> *[University] has been extremely lax over the years, in terms of managing its reputation … there are even examples of papers where the journal hasn't been bothered to find out where the centre is and has credited [name]. [Administration]*

A lack of emphasis on the 'branding' of Schools within the University failed to take advantage of historical information.

> *If we're going to really attract those students and advantages that they bring with them and also the challenges, then we've got to be more clever in our marketing, I think. [Medical]*

The influence of NPM introduced market-forces and the treatment of students as potential customers revealed how their views influenced what was acceptable. For example, poor facilities may communicate a negative impression.

> *You never get a second opportunity to create a first impression. [Administration]*

Comparisons with other Universities provided the context for concern.

> *... we do well at keeping students, but it is again an area where I think the college has to be careful. There is no room for any complacency, and as the students begin to pay top-up fees, will poor facilities for students …, because I see student accommodation and student sport's facilities and general facilities are not able to compete with some of the newer universities, somewhere like [name], and campus universities, lovely sport's facilities, nice accommodation. [Medical]*

This view illustrated awareness that it is not only the educational aims of the organisation that were important in a competitive HE environment, presentation of other aspects of the organisation influenced views of external observers, including potential customers. Furthermore, defensive approaches represented a way of reducing risk to an acceptable level.

5.5.4 Degree of Control

The narratives revealed increased concern about risks over which it was difficult to exert control (Adams, 1995).

> *The things I can't control make me more stressed than the one's I can control. [Administration]*

> *I worry about it, I'd love to have influence over it, but I've no management direction on it. [Administration]*

The ability for senior management to exert centralised control was questioned.

> *There's a culture at [University] in certain areas, well, I think it does exist, this is a caricature, where people will say 'yes, Principal' and go and do as they like, and I think that's got to be changed. [Administration]*

Furthermore, responsibility and accountability were not always aligned.

> *There's a delicious irony in all this, I get blamed for the quality of the data in the student database, but have no responsibility for inputting it. [Administration]*

The poor quality of data within the central systems could be linked to this narrative, since those responsible were not accountable, and blame was apportioned elsewhere.

An incident of research fraud was cited as a possible threat to reputation and consequent funding, providing a different interpretation of one of the sources of operational risk suggested by Crouhy et al (2006). In a HE context, the risk of fraud was not limited to falsification of financial records. The effort required to cross check all research data was not available, therefore, researchers needed to be trusted, so management of this potential threat was difficult.

NPM delegation of risks through PFI arrangements reduced the degree of control and attempted to shift responsibility.

> *You delegate the responsibility for the safe management and operation to a contractor, but I think at the end of the day, if you ended up in hospital on a drip for 10 days and you wanted to sue someone, you would be suing [University]. [Administration]*

Degree of control varied within the organisation. Physical threats represented a problem at one site, where psychiatric patients are treated, but were not mentioned elsewhere.

> *I think the bigger risk for our staff probably comes from people from the public, who wander in off the streets, who may be affected in all sorts of ways, we share 3 hospital sites, including [names], so there are people around on hospital sites who are obviously suffering in one way or another. [Administration]*

In this case, the risk affected one of the Schools in the University, but had little or no influence on the remainder of the University. However, in relation to reputation, an incident relating to injury to a student in one part of the organisation may reflect badly on the institution as a whole, despite other groups' inability to control the risk.

In one School, local IT management had been implemented to prevent data loss, enabling increased control.

> *Everything here is backed up over night for everyone, so people don't have to back up their own files, which they have to do everywhere else in the college. [Medical]*

The influence of degree of control in reducing risk was evident in the description of improved effectiveness under local management. The narratives illustrated lower tolerance to risks that lay outside of their direct influence.

5.6 Uncertainty

This section illustrates the presence of uncertainty within interview descriptions of risk. Since interviewees did not undertake risk assessment, the focus is on general comments about uncertainty that shed light on the activity.

5.6.1 Risk Assessment Output is not a Form of Measurement

Interviewees were aware that inadequacy of information poses a risk in itself.

> *The risks are that we don't know what is going on, where there is a lack of information, a lack of communication. [Administration]*

Incomplete information formed an inadequate basis for risk assessment.

> *I don't know whether there is any data available as to the frequency and quality of appraisal in practice, I don't know whether that data exists. [Administration]*

In addition, narratives revealed that some risks were not amenable to quantification.

> *The things that have given me most stress have been HR issues, to do with people's performance and complaints and things of that sort. [Medical]*

The actions of others were unpredictable.

> *HEFCE wakes up one morning and changes its mind; the government wakes up one morning and changes its mind 'we won't put money into research'. [Administration]*

This included the actions of those within the organisation.

> *A great example of being wise after the event, many times, but trying to second guess what people might do, and might think is a sensible way of dealing with an issue, with 5,000 staff, it's quite a challenge actually. [Administration]*

Very few of the risks could be sensibly quantified, either in terms of financial loss or gain, or in terms of likelihood of occurrence.

> *Managing your reputation in a big sense is extremely difficult to predict. [Administration]*

Risk identification was further complicated by need to consider different stakeholder views and values. The interviews illustrated the problematic nature of risk assessment in the light of uncertainties associated with identified risks.

5.6.2 Uncertainty Surrounding Aims and Objectives

An awareness of double contingency in communications suggested that interpretation of governance posed risks in relation to understanding requirements.

> *We interact with the Quality Assurance Agency, interpret, as best we can, their usual madnesses, and try to apply them. [Administration]*

Another concern was how governance aims were assessed and measured, and, in particular, the composition and expectations of RAE panels.

> *… it's not simply that we don't get the students, or we don't hit the target, it's also that either the college or the government changes its funding rules. It's that the RAE panels get quirky, and as has happened throughout the college, Departments have suddenly suffered quite severe losses in income, when you could argue, unjustifiably another Department has got a huge increase. [Academic]*

A risk in relation to HEFCE governance was highlighted by the ambiguity of external requirements in the face of outcomes that were unpredictable.

> *It's just that sometimes we can all get driven so much in a direction, and a couple of minor changes or reading the ether wrongly, can lead to an assessment that doesn't feel fair sometimes. [Medical]*

> Methodological doubts about evaluation and rankings co-exist with acceptance of the powerful facticity they generate and towards which management effort must be directed (Power et al, 2009, p178).

When interpreting external aims was problematic, there was difficulty translating them into internal aims and communicating them to staff.

> *One of the things that we are excellent at is writing strategic plans. What we're poor at is implementing them. [Administration]*

Since risk is conceptualised as failure to achieve aims, this lack of clarity provides an additional uncertainty for the assessment process to cope with.

5.6.3 Uncertainty Associated with Process Control

Internal organisation structures increased uncertainty through reliance on individuals or personal relationships to get things done.

> *It's individuals, I think the only way this business works is its people. [Administration]*

The University had established a policy zone on the website, so access to internal policies was easy, but gaps are noted.

> *Many of our policies, which have been widely accepted for some time, are actually not written down anywhere. [Administration]*

Furthermore, when policies did exist many interviewees were not aware of their availability.

Since it is impossible to prevent all risks, procedures were needed to mitigate potential effects.

> *People can be left to deal with very difficult and sometimes risky situations, and we need to ensure that they are properly prepared to deal with those, and that they have other people to call upon, should they be at risk. [Administration]*

However, disaster-planning remained poorly developed in most areas, contributing to negative outcomes in the event of an incident.

> *Well the whole issue of disaster recovery presents some challenges. [Administration]*

This may be related to limited funding, leading to a reactive rather than a proactive approach to spending.

A lack of standardised processes throughout the University was observed as a potential threat to the organisation.

> *We've also identified the risk of different Schools doing the same thing differently, and at different times and so on and so forth, and we've moved to standardise that, there's one or two Schools out there still kicking and screaming, but we are actually moving*

> *in the right direction, so I mean, we've not centralised anything. [Administration]*

The question of whether standardisation or centralisation of academic management would reduce administrative risks may be a matter for the College Council to consider.

> A refusal in the universities to give rational discussion of their administration a high priority must result either in tyranny mitigated by muddle or in time-wasting reduplication of effort (Dearlove, 1998b).

Participants described an increase in risk associated with poor process control, and the variability of approach across the organisation made it difficult to assess the effectiveness of management controls as an input to the net risk calculation.

5.7 Summary

This chapter has provided an illustration of the findings from Phase 1 of the study, in relation to each of the research questions. The Phase 2 narratives will be similarly detailed in the following chapter. Both sets of findings will be integrated in the analysis chapter to follow, to explore the links to theoretical perspectives and make clear the significant contribution these findings make to the field.

The following chapter illustrates the findings from Phase 2 of the research investigating how the process operates within the organisation during risk management workshops, with additional data from follow-up interviews.

6 Phase 2: Embedded Case Studies Findings

6.1 Introduction

The findings from Phase 2 of the study are presented in this chapter to illustrate aspects of each of the research questions. The theoretical motivations for the sub-headings in this chapter remain consistent with the previous chapter. An overview of these can be found in the introduction to Chapter 5 of this thesis.

The data illustrated in this section was collected during planned risk management training, and was supplemented by follow-up interviews with 12 of the 20 individuals who attended, covering all training sessions. The training was based around a presentation with two breaks for workshop sessions. The majority of data was taken from the workshop sessions, supplemented by queries and comments raised by attendees during the presentation section. I attempted to remain outside of the workshop discussions to reduce personal influence, interjecting occasionally to show engagement. The nature of each embedded case and selection criteria are detailed in section 4.7. The individual providing the narrative can be identified through their assigned codes, designating training session number and attendee number, in addition to role type (see Appendix 5). Each section contains narratives from each of the 3 embedded groups, enabling differences and similarities to be observed. The format facilitated the analysis presented in the next chapter, which draws these findings and Phase 1 data together with organisational documents to address the research questions.

One of the differences between Phase 1 and Phase 2 reflects less ability to structure responses in workshops, in comparison with interviews. Consequently, the workshops did not directly ask individuals to describe their aims, and a preliminary analysis of aims is not included in this chapter. While participant narratives do not explicitly include their interpretation of aims, these can be identified within risk understandings.

6.2 The 'How' of Risk Assessment

Participation in risk identification and assessment activity provided rich descriptions of how the formal process operates. In addition, they illustrated many features of informal risk management, and encouraged examination of detailed aspects of the 'how' research question.

6.2.1 The Interpretation of HEFCE Governance

Contrasting with Phase 1 interviews, DI was aware of the introduction of formal risk management in response to HEFCE guidance. One interviewee describes the risk management model as another passing management fad[18] (Abbott, 1991).

> *I mean the buzzword a few years ago was SWOT [Strengths/Weaknesses/Opportunities/Threats] analysis. [T1A2 Academic/Manager]*

I explained, in the workshop, that this analysis tool was suggested for use within the Risk Management framework, and could form part of the overall implementation, but acknowledged that models recommended as 'best practice' change over time. Reflexively, I was careful to be guarded in my response, attempting to avoid influencing group perceptions, particularly since discussions indicated their treatment of me as a free management consulting resource, and consequently, viewing me as an 'expert'. Another DI interpretation of HEFCE guidance was a focus on risk reduction and auditability.

> *You can argue that if you're critical of HEFCE, that it's a document that takes a reactive stance, rather than saying we're coming to audit you looking for opportunity. [T1A1 Academic/Manager]*

Consequently, DI expressed the concern that the risk management framework encourages inertia and risk avoidance.

> *We could tick the boxes and say we'll stay here and never change anything, don't fix it, it ain't bust. Just keep our heads down, just*

[18] A fad is "a practice or interest followed for a time with exaggerated zeal" (Merriam Webster's, 1996)

tick the boxes, and be seen as good guys with low risk, but would fail. [T1A1 Academic/Manager]

Within the DI workshop the rating system was difficult to apply in assessing opportunity risk, reflecting the focus on risk reduction, since both positive and negative aspects were being weighed against each other, and there was only one scale available. If, for example, there was a high probability of a merger, with expected long-term benefits, utilising the HEFCE guidance for risk rating it would be classed 'High' risk (High impact/High probability) and would have negative connotations, whereas, this would represent a potential positive outcome for the organisation.

The risk management process addressed only potential negative outcomes.

Now it sounds as if it is the threat bit from the SWOT analysis that is now called risk, which is now called risk management. [T1A2 Academic/Manager]

The interpretation of HEFCE risk guidance as threat control was shared by all members of the DI training session. The emphasis on reducing risk was discussed in a negative light, reflecting the local DI interpretation that risk should be embraced to secure potential gains for the organisation, reflecting the idea that risk is not necessarily a bad thing (Anderson, 1999). It is ironic that although the HEFCE (2001) definition of risk embraces both positive and negative aspects of risk, and matches DI understanding of risk, the formal guidance and associated practices result in a DI interpretation of the model as focussing on risk reduction.

The recommended model does not combine risks for an overall level of acceptability to be calculated. This was desirable in the view of one E&F attendee.

It's sort of a consolidated view, as well, because you've got 3 mediums and that's not acceptable, if you've got 3 lows and 1 high, that might, there is something about the mix of them as well. [T3A5 Manager]

The attendee reflected a concern that combinations of interrelated risks pose threats to organisations.

> Manifestations of strategic risks tend to be relatively rare events. 80% of companies with largest stock-price losses had been hit by 2 or more risks that were interrelated (Gates, 2006, p82).

The HEFCE framework and the private sector publication, Enterprise Risk Management: An Integrated Framework (COSO, 2004) do not provide any guidance on this aspect of assessment, although I was aware that such techniques could be used within probability calculations for reliability engineering. However, given the lack of data to support the assignment of values, this is unlikely to be a serious criticism of these frameworks.

The link between risk management and decision-making was identified in E&F as an important aspect of the governance (Luhmann, 2005).

> *Someone once said, in terms of what you do, especially at management level, you are not paid for turning up, you are not paid for your technical knowledge, you are paid for the quality of your decisions, and that's really what you do, and that ties back into this. [T2A2 Manager]*

In the context of the HEFCE guidance, the question underlying this statement was whether the implementation of the risk management framework improves the quality of decision-making within the organisation.

Since the majority of the BHS group were unaware of the risk register, the Risk Management Policy and HEFCE risk management governance there was no discussion of HEFCE governance during the training or follow-up interviews in their workshop.

The groups displayed considerable discrepancy in awareness, understanding and interpretation of the HEFCE risk management governance. The DI provided a critique of the model and reviewed how to implement it; E&F were aware of the HEFCE initiative, but not the

model; and the BHS group remained completely unaware of HEFCE ambitions, with the exception of one who was aware of the risk register, but not of its link to the regulator.

6.2.2 Competing Aims

This section describes how competing aims require trade-offs to be made. The goals of the external organisations linked to the DI were significantly different to local aims, requiring consideration of the needs of partners.

> *They're not so worried about the academic standing, they're worried about how many patients will it bring in, how many outpatient and inpatient fees. [T1A1 Academic/Manager]*

When organisational goals were not congruent, or even conflicted, it posed additional difficulties in the balancing of risk priorities.

In E&F, there was a perception of unfairness about the distribution of resources within the organisation in relation to estates, with an emphasis on achieving research goals in favour of other aims.

> *They decide they want to bring somebody down from Oxford, and they want to put them here, and they want to throw millions at it, to get them to come down, to make us this global player, but the problem is it's failing elsewhere. [T3A1 Manager]*

BHS confirmed the emphasis on research excellence.

> *All the money now gets put into research. [T4A1 Technical Manager]*

The need to balance the teaching and research aims was acknowledged.

> *The tension between teaching and research, in that you are a research-led university, but a lot of our kudos actually comes via the teaching environment and there is always a tension between the two of them. This is a problem. [T4A3 Technical Manager]*

The attendee described a collibration mechanism (Mikes, 2004) in which attention swings between opposing objectives over time.

I think that probably it is a pendulum, it will swing, no doubt it will swing back the other way, eventually, but we are going in the direction of research. [T4A3 Technical Manager]

Another felt that the main thing was to ensure the University had funding, from whatever source.

I suppose as long as the money comes in whether it is via teaching or research … [T4A6 Technical Manager]

Reduced emphasis on teaching might have long-term impact in BHS.

It may feed back eventually. We may actually get lower and lower ratings from the Schools, so that the Head of Science, or whatever it is will say, 'yes, it's very nice but I wouldn't go there'. [T4A3 Technical Manager]

However, on reflection he noted that the number of high quality students applying for many courses reduced the impact of the risk.

So, it is going to take a very long time before you don't get anyone applying to Medicine, the same with Pharmacy. All of these career oriented posts, you are always going to get people applying for them. You don't actually have to do anything to get them to apply. [T4A3 Technical Manager]

In BHS there was concern that the nature of the University was being fundamentally challenged by recent research emphasis (Tapper & Salter, 2004).

They are now finding people to do the teaching, which is getting contracted out, but the problem with that is, it is not a University then. [T4A3 Technical Manager]

The attendee reiterated a threat to the whole ethos of the University.

They have to because it is a University, and it is seen as something that we have to give lip service to, to keep the title. Otherwise, it would just be called the Research Institute of [University]. [T4A3 Technical Manager]

Other workshop attendees indicated agreement with these statements. An increasing use is made of teaching assistants and temporary, often part-time staff, to relieve active researchers from teaching duties.

Teaching is less valued than research (Elton, 2000). The lack of prestige associated with teaching was clear.

> *The risk is that the general public find out that no one gives a toss about teaching. [T4A6 Technical Manager]*

This participant perceived a long-term threat because of the population profile of staff in the University.

> *At the moment, it is still at a level where we've got a lot of people who just do teaching, and they enjoy it and that's what they are here for in the first place. Apart from research, they are all getting quite old and they are all going to go. Then that's going to create a difficult situation because we are not recruiting. [T4A6 Technical Manager]*

Despite the technical role of the attendees in this group, they showed more concern about teaching and research balance than the attendees in the other two embedded case studies, reflecting preliminary interviews, suggesting this concern was not tightly linked to seniority within the organisation. However, it should be noted that high quality teaching and research were the aims chosen for focus of the risk workshop and may influence the participant responses. Nonetheless, the findings confirmed that balancing these aims was a major concern for BHS attendees, reflecting anxiety about changes to the local system associated with School reorganisation and the establishment of Research Divisions.

The findings reveal that the DI expressed concerned with balancing educational and NHS aims, E&F focused on access to estates funding and BHS emphasised threats to teaching aims, confirming an emphasis on sub-goals to identify risk within the organisation. All narratives confirmed that risk management has to incorporate ways of balancing competing objectives.

6.2.3 Implementation is 'Fit for Audit'

In an autopoietic system, responses to risk governance compliance would exhibit outputs that are fit for audit. In the DI, awareness of the

possibility of audit and external oversight in relation to governance was clear.

> *I think if HEFCE were to pay a visit to look at our risk register it might be incumbent upon us to actually look at it, and make sure, that other people have looked at it. [T1A5 Academic/Manager]*

Locally the document provided a safeguard against audit.

> *We should be aware that there may be a need at some stage, for the college to say to HEFCE 'we do it and we can see it works'. [T1A4 Academic/Manager]*

It was with an eye to the possibility of audit that compliance issues were considered. A DI criticism related to the paper trail required to demonstrate adherence to risk governance.

> *It seems to me there are two sides to this, and one is to do it and recognise that we are doing it, and by doing so there may well be areas that we identify and should be included, or, and in our minutes, we need to have the words risk management there somewhere, on occasion. The second thing is an audit trail, because how the heck do you know and distinguish between an institution, which has a systematic culture of risk management, versus an institution that has not? [T1A4 Academic/Manager]*

There was resistance among DI staff against the implementation of a system solely for the purposes of demonstrating compliance.

> *It's the sort of thing that drives me mad, I have to say, because it's one thing doing it and quite separately showing that you do it, and to actually alter what you do to show somebody else. [T1A4 Academic/Manager]*

One attendee expressed concern about the University emphasis on the risk register as a compliance tool.

> *That's the thing with these risk registers, that's the tool that the college is using to show what risks we've got. [...] It's interesting because you see the only thing they are doing is about whether we have got a risk register. [T1A3 Administrator/Manager]*

Senior management communications showed concern about complying with HEFCE guidance, embodied in a requirement for local risk register

completion by a given deadline, but there was little emphasis on risk management as an aid to improving performance in Schools and Departments.

Within DI, there was a view that risk assessment did not stimulate the production of contingency plans and the approach was to hope none of the potentially serious threats materialised.

> *We'd do the risk assessment and hope there wasn't a serious terrorist attack on [name] Station, or a major structural flaw in the tower, or a student passing on HIV to a patient. [T1A1 Academic/Manager]*

Since the risk register was the proxy used to indicate compliance, the lack of action resulting from assessment was interpreted locally as further indication that the process was a purely compliance based exercise. In addition, whilst the DI workshops revealed that risk management activity formed part of their normal business practices, they illustrated that the risk register did not provide information about how risk was actually being managed locally.

> *The college has put out something asking for an index and actually it has already been reported back to the audit committee that certain Schools haven't filled in a risk register. The assumption underlying that report is that they are not doing it, and actually as a result of this seminar, what we might do is actually say exactly, that is how we do manage risk, so that it isn't important that there is nothing on the register. [T1A1 Academic/Manager]*

Senior management emphasised compliance, rather than an integrated approach intended to improve management decision-making.

The E&F Department did not discuss risk register completion, but focused on compliance with the legal requirements in relation to buildings, including H&S, and this environment was continually changing.

> *And they are changing legislation like my wife changes shoes. [T3A1 Manager]*

One example of recent change was provided in relation to compliance with new fire regulations.

> *Never did before, when it used to be somebody would report a fire door, but now we're being asked to look at them 3 monthly, check all the fire doors […] and prove we've done it, keep records and audit trail and all that kind of thing. [T3A1 Manager]*

There was no suggestion that these changes made the buildings safer, but the need for procedural compliance had been addressed (Rothstein et al, 2006a).

One interviewee took a more personal view of risk, related to job function, requiring compliance with H&S risk assessment processes.

> *My job is actually about keeping people out of prison. [T3A1 Manager]*

The attendee went on to illustrate how procedural compliance deflected responsibility when authority was lacking.

> *We actually practice that, but without the risk register, because what we actually do is, that if there is something which is a known risk, we actually tender it, we actually put the report together and then it goes into the system, so that if the HSE come knocking on my door and say 'why haven't you done this?' I go, 'there's the report that went in, I haven't got the authority'. It's prescriptive because you follow risk assessment and as long as you can demonstrate you've followed the procedure, then there's little more you can do. [T3A1 Manager]*

The adherence to the procedural requirements of H&S enabled individuals to reduce risk to themselves, and to transfer responsibility to the individual with authority for funding.

Legal compliance with H&S requirements dominated the management of risk in E&F.

> *We guessed around the backlog of maintenance services would be in the order of £70 million, and I think it came out to about 74. Yes, but the problem is the college has given us £6.8 million to deal with the problem, so the way that we deal with that risk is*

> *that we categorise it into 3 separate categories, statutory, business critical and anything else. So, we never get to the anything else, because all the money is virtually taken up by statutory and we take risks on the business critical. In fact, one of the areas that you alluded to earlier, which is the computer centre in the [name] is one of the areas of business risk, and unfortunately the college have got caught twice this year, and now realise how big that risk is. [T3A1 Manager]*

There was little alignment of estates spending with strategic aims; compliance with legal requirements took precedence.

The BHS group had not been involved in the risk register process, and the only implementation issues discussed related to H&S compliance.

> *There are a lot of control systems in, and the only way that we've found of controlling risk is money, and if students do projects that are paid for by the School via their supervisors, they will not get the money unless a risk assessment is signed by the student. Which means, at least, they may not have read it, but they have signed it. [T4A3 Technical Manager]*

Another attendee was sceptical about the efficacy of such processes.

> *It works in terms of ticking boxes, but whether it actually works, I doubt it. [T4A6 Technical Manager]*

All three groups used risk assessment processes, focussed on local aims, as an autopoietic response, to enable conformance with procedural requirements to protect the institution or the individual, rather than serving to support other functional aims (Rothstein et al, 2006a).

6.2.4 Communication in the Organisation

The workshops proved very revealing about not only the communications that have been received, but also how reflexive systems interpret and react to these signals, including a lack of feedback. The risk register process fed data upwards within the hierarchy, with little evidence of feedback to the management team in DI. One attendee commented.

> *So, it should have been a 2-way process. Should the college be reassuring us that they are dealing with ISS, estates, terrorist attack, flu epidemic, whatever, to say 'yes, there is a risk, analysis has been done, and there's some thoughts about a contingency plan, to cover these things', because I don't know if the college has got these things or not. I don't know what the risk register and the risk assessment for the e-mail is … hopefully there's some backup. [T1A1 Academic/Manager]*

In the face of the lack of information, the DI response was to assume the responsibility lay elsewhere, and to hope it had been addressed.

There were examples of poor feedback to E&F about decisions in relation to financial approvals.

> *We understand from the Principal's Central Team that [name] has been able to find a £1 million for the roof, but we don't know for sure, I mean, that's a decision that he may or may not have taken yet. [T3A4 Manager]*

The lack of feedback about financial decision-making resulted in staff having to assume that the request had not been approved.

> *What I have a problem with is the fact that you are not telling the people that you are not going to spend the money. [T3A1 Manager]*

Poor internal communication increased difficulty for those involved in some E&F roles.

> *There is a problem. I know they are striving to improve communications and I think it is starting to happen now, but this has been the problem, communication flow to those that need to know and particularly those on the front line. [T3A4 Manager]*

The distribution of documents was another aspect of communication that was cited as a problem in E&F in 2007.

> *As I can recall the Minutes of the last meeting were January 2006, nothing since then. It's not good. [T3A4 Manager]*

The draft strategy for the E&F Department provided an illustration of this issue.

> *Have you seen a draft of the Estates strategy yet? I have only seen a draft, but there is nothing in there about sinking fund. [T3 Manager]*

E&F attendees confirmed they had not seen the document, indicating that the strategic planning process was not penetrating even as far as senior management levels of the hierarchy. The attendee who had seen it was from the Finance Department. There was also a lack of involvement in decision-making.

> *I'm not always involved in all these discussions. [T3A4 Manager]*

Several E&F attendees identified the failure of internal communication processes as a source of risk.

> *I think one of the greatest risks from the college is from itself, because it is not really a coherent organisation. There are problems with communication that I've certainly noticed, and lack of consistency of approach across the patch to try to get, to really engineer the college itself, so it is fit for this century. [T2A3 Manager interview]*

There was variability in policy and procedural implementation across different parts of the University.

Lack of response to risk concerns was evident.

> *What if you just, when you raise a risk, it is just like battering your head against a brick wall? [T2A1 Manager]*

At the other E&F workshop, the idea that raised risks may be ignored was reiterated, but the formal risk register can be interpreted as a form of communication that transfers responsibility.

> *It is quite interesting, because if you came up with a risk register with all these different things on it, and kept presenting it, again and again, at PCT and at [unclear] committee, and it's very difficult, you have covered all your responsibilities. You have done everything you can, and the buck stops much further up. [T3A5 Manager]*

Another highlighted the use of risk assessment outcomes to transfer responsibility to others through the passing of information.

> *That could be the benefit of a formal risk analysis, couldn't it, because I've pointed this out, but it is probably in an e-mail to somebody, and they've probably, you say 'I've sent that e-mail saying it was dangerous'. Well, so what, but if it was a formal risk assessment that went forward, you say, 'well, you can look at this now and the decision is yours'. [T3A2 Manager]*

An interesting question is whether the recipient of the message interprets the communication in this light, and takes responsibility for action. The narratives from E&F indicate this was not the case, and in the event of a problem, the individual who thought the responsibility had been transferred elsewhere was required to manage subsequent events. The E&F interpretation of senior management lack of concern about risk was expressed about a consultant's review.

> *He raised loads of very interesting questions which would not bother them in [name]. I mean, they'd be bothered if they thought about it. [T3A2 Manager interview]*

Local risk concerns were not treated as 'information' by the higher echelons of the organisational hierarchy. When data had been gathered and disseminated by E&F, the outcomes had not been positive.

> *Because what we do is not tell people. In fact, as you know, we paid a consultant to come in and do a whole risk assessment, and we shall say no more than the documentation was not forthcoming. I must be careful what I say, because I think the story in it was too … [T3A2 Manager]*

A further example related to risks in the Halls of Residence.

> *There are all sorts of aspects with residential accommodation. It is not just alcohol, there's also drug taking as well. [T3A4 Manager]*

The E&F attendee was aware that senior management had been informed about these concerns.

> *And that can affect all sorts of things, emergency situations and we are aware of these risks. I know the college has received documentation about certain things that go on in residential*

accommodation, and that went to the Principal. It did go to the Principal's Central Team, but what action they're taking I know not. [T3A4 Manager]

This lack of feedback from the PCT illustrated how absence of communication can function to discourage action on the part of members of the E&F team. A risk to the organisation in terms of legal compliance was identified.

Basically the college should report this to the police, it is still illegal to be taking Class A drugs, Class B drugs, and if the college is aware that crack/cocaine is being taken, OK cannabis is looked upon as slightly softer, but they are all dangerous drugs in my view. The college is, I know this is being recorded, but the college does tend to turn a bit of a blind, Nelson's blind eye to this. It is a difficult one actually, because 'Duty of Care', looking after them and what have you. [T3A4 Manager]

The contentious nature of this risk discouraged inclusion in a widely circulated document, since disclosure to the press could influence the parents of students and consequent choice of University, should the reputation for drug-taking be linked with the organisation. A potential terrorist threat on campus further illustrated concern about formal recording of risks.

I might not say it in an open forum, we do have quite a high Muslim population, within [the University], and we have a Muslim prayer room downstairs, that up until 6 months ago was free access, and we found that we had people coming in off the street to use it. There was a fire exit on the back of that at street level, which on occasion was being used, and people were coming in and out covertly. And you just think, well, we don't want to restrict movement for our own Muslim student population, but we don't want people who are not in college coming in to use these facilities, and if you are doing that, well what is the risk, and who is assessing that risk? We had on one occasion, I know they have tightened up on it now, the Islamic students society had on occasion got in speakers, into this building, who were preaching fundamentalism, and were attracting in, it is public access, again, you just think, did anybody really…? So, terrorist threat I think is one that should be taken into account. [T4A5 Technical Manager interview]

There was clear reluctance to express such concerns in a written document, or even to discuss in an open forum such as a risk assessment meeting, and the risk was only revealed during a one-to-one interview.

Communication of the Risk Management Policy has failed to cascade down to members of the BHS group. Participants, with one exception, were unaware of the existence of the risk register before training.

> *I found out there was a risk register. [T4A2 Technical Manager interview]*

All Schools and Departments have submitted the risk register over the previous two years. However, the staff considered suitable for the training course in BHS were not, and do not expect to be, involved in the process.

> *We are not even sure if they are letting us see the thing [risk register]. It doesn't make any sense at all. [T4A6 Technical Manager interview]*

The process did not indicate whether they would be included in the circulation of the Corporate Risk Register or the local section of it.

> *Well, the fact that we might get to see the risk register, which would make the whole thing worthwhile, because without seeing it, it is pretty pointless doing it, to be quite honest. [T4A2 Technical Manager]*

Furthermore, the impact of authority and seniority was reflected by one trainee's comment.

> *I don't really think they would take any notice of anything that we said anyway. [T4A6 Technical Manager]*

BHS demonstrate that it is going to be difficult to involve more junior staff in the process, both in terms of risk disclosure and authority to act.

In relation to the central server failure, a BHS interviewee cited communication from the Principal.

> *The server in the last couple of years has gone down for 24 hours or longer, on a couple of occasions and the Principal has said that that is a major problem, which he wants to address. [T4A5 Technical Manager]*

It was unclear where this feedback came from, whether it was a formal communication to staff, cascaded through management, or was received informally through talking to other staff.

Taking the SST perspective that the training could be interpreted as senior management communication about risk within the organisation, some changes in the DI trainees' perspectives were identified because of attendance.

> *We do a lot of this discussion about risk at the time, but perhaps don't think of it, when you are discussing it, and I think it really just helped us, to put that in your mind when you are having a discussion, to think about the risk sort of side as well. [T1A3 Administrator/Manager interview]*

The information provided in the training enabled recognition of risk management practices.

> *I mean, for us, the most important thing was to recognise that we are actually doing it anyway. [T1A3 Administrator/Manager interview]*

This encouraged the group to include the concept self-referentially.

In the E&F follow up interviews, it was evident that process changes had been made, linked to the training activity.

> *We all sat round to put our two-penn'orth in, as to what we thought regarding the Department's risk register. [T3A3 Manager interview]*

The feedback from the study to senior management was seen as a potential stimulus for tailoring risk management processes in a way that would be appropriate to the institution.

> *I know you are doing this as part of a PhD thesis, aren't you, with Internal Audit? So I would be hopeful that from this, the*

spin off is that 'well, let's look at this, and how can we adapt and fine tune'. [T3A4 Manager interview]

One of the E&F attendees welcomed the information about increased focus on risk management.

It is good that the college is looking at it, and about time, I would say. [T3A2 Manager interview]

The training helped people understand the purpose of the organisational change.

Inertia comes in. I mean, nobody likes change, but if we can see the reason for it and we can understand that through this change, things are going to improve, improve for students, improve for our researchers, and also the staff, because I think staff morale has not been particularly good in the last couple of years. [T3A4 Manager interview]

Since the BHS group were unaware of the risk register's existence, and had not been involved in the risk assessment process.

I hope to see the risk register. To be quite honest, until then, I don't think that I will take anything forward from it, because I've got enough to do anyway. [T4A2 Technical Manager interview]

In contrast with other groups, they saw little likelihood of follow up action.

Poor communication within the organisation resulted in varying levels of awareness of policies and procedures. Lack of feedback generally illustrated how ignorance is propagated and can relieve responsibility and the narratives illustrated how formal risk communications can function to enable blame avoidance within the organisation.

6.2.5 Uncertainty Reduction

The first two workshops suggested that the assessment process is itself a means of reducing uncertainty, through the assignment of ratings and mitigating actions, to provide a contribution to organisational decision-making more generally.

When you've got numbers, it does force you to try and make a comparable level of risk. [T1A2 Academic/Manager interview]

I think it forces you into a decision, which you might not otherwise make, and probably for that reason, it may be a good thing. [T2A3 Manager interview]

The ability to compare different types of risk is a supposed benefit of using numbers or categories in risk assessment, despite the questionable basis for such assessments. The use of numbers stimulated curiosity about mathematical techniques.

Do you use a standard equation for the probability of risk happening? [T2A2 Manager]

One E&F attendee identified an advantage to using numbers in the assessment.

I think it is a fair way of doing it, I think you've got to have some way of judging, and I think people are comfortable with numbers. [T3A1 Manager interview]

Another E&F trainee recognised that the assessment process is not a form of calculation, but nonetheless, felt the use of numbers was helpful in identifying the greatest threats.

I think it does help to put numbers against things because otherwise, it just becomes a bit vague, and if you don't try, I mean, it is not an exact science, you can't just sit there and say 'well, what are the chances of this event happening?' You have to make a guess at it sometimes, but it does help to put some numbers against it, otherwise no one really knows what to concentrate on, as the biggest area of risk. [T3A3 Manager interview]

When asked about the usefulness of numbers, one BHS trainee was unsure about the benefit, and provided an example of a scenario based risk assessment.

Someone said the other day, 'oh, we need more first-aiders in this building, because, we could have an explosion and you could get 8 or 9 people injured at one time'. Well, I've been here 35 years, I've not had 2 incidents at one time, so yes, there is that risk, but,

I don't know, is the answer to that. [T4A6 Technical Manager interview]

The difficulty in this case is the shortage of resources generally, so, if there is no such incident, the money could have been spent elsewhere. However, if the event occurs, the organisation will avoid the blame that can be associated with lack of preparation for incidents, and may save lives.

Contrasting with these comments, there was general reluctance to assign risk assessment values in all workshops in all case study areas. One BHS attendee did provide a qualitative rating.

It would be a medium risk, I would have thought, because the impact is expense, OK, […] and the impact would also be to reduce the quality of the teaching. [T4A4 Technical Manager]

The BHS trainees agreed that it was difficult to be too dogmatic about which rating a risk should fall within.

It is very difficult to actually decide whether you are going to have a 3 or a 4. It's helpful, yes. [T4A4 Technical Manager interview]

Despite the lack of clarity about how to assess the risk in numerical terms, the use of numbers was still perceived as useful by this interviewee.

In contrast, a couple of other BHS interviewees thought that it was not helpful.

No, no, I never think they do anything. [T4A3 Technical Manager interview]

I'm not sure whether it is valuable. [T4A6 Technical Manager interview]

One BHS attendee expressed concern about increased confidence in ratings, expressed as numbers.

> *People think it is really absolute. Yes, so these are the scores, likelihood of it occurring and severity, you see, there's risk scores there. [T4A3 Technical Manager interview]*

This echoes concerns expressed by Power (2004b):

> Use of qualities as quantities is common where there is a demand for metrics, gives measurement systems an 'invented' accuracy (e.g. risk assessment score) which reflects wider cultural anxieties and the need for numbers. Notwithstanding the questionable first-order foundations of such measurement systems, they nevertheless direct management attention and have real consequences (Power, 2004b, p776).

Furthermore, there is danger in thinking that since calculations have been made the risks are managed (Bernstein, 1996b); the risk register is in the drawer and risk management activities are complete for the year.

One E&F attendee confirmed that the decision to mitigate a risk may be based more on the desire to reduce uncertainty by choosing to act on a risk that can be managed locally in preference to a more difficult one (Bernstein, 1996a).

> *Well, I would say, because it is easy it is worth doing. [T2A1 Manager]*

Consequently, the local ability to reduce uncertainty by taking action confirms the role of authority or power in risk mitigation.

This section highlights one of the surprising findings in this study, the general preference for the use of numbers, as a means of comparability to increase confidence in assessment outputs, reducing uncertainty, alongside the near universal unwillingness to assign such values.

6.3 Influence of Organisational Group

In the light of HEFCE risk guidance (2001; 2005), the ability to integrate risk registers from different groups, to form a corporate risk register, makes it

important to understand how the organisational setting influences the assessment of risks and acceptance of responsibility for action.

6.3.1 Interpretation of operational risk assessment

This section reveals how this interpretation has important implications for the implementation of formal risk management systems. Within DI, there was lack of clarity about the scope of operational risk.

> *I am having difficulty with the definition of the term risk. I mean, it seems to me I came here and I think I can understand risk in terms of H&S, and live with that. If you say how many of your laboratory reagents are carcinogens, right, I can identify them, then we get the resignation of the Chief Executive from the Trust, now you are saying that's a risk. [T1A2 Academic/Manager]*

The training feedback from E&F illustrates that several members of staff came to the session with the view of risk as synonymous with H&S.

> *I think the most useful thing was just sitting down and thinking about risk as being more than just H&S risk. That it covers all areas of the college's business as a whole was most interesting, and making us think about how we plan our works and rather than this assumption that we can just carry on and everything will be fine, and college carries on for ever. [T3A3 Manager interview]*

The BHS group exhibited similar confusion in relation to H&S and operational risk illustrated in the other cases.

> *Of course that's the first thing I thought, was, I thought it was going to be all about safety. [T4A4 Technical Manager interview]*

> *I suppose it's just raising the general awareness of the subject and making you think about it and thinking 'yes, we ought to do something about that'. Just trying, just looking at it from the point of view of business risk, rather than H&S risk. [T4A5 Technical Manager interview]*

One BHS individual expressed concern about implementation of risk management in view of confusion between operational risk management and H&S, and the resulting interpretation of risk assessment.

> *The trouble is the word 'risk' is used, and we already have a whole flotilla of things under risk assessment. I know your thing is different, but those are mandatory, and we have to do those every year, and it is a real bore, so to put this on top of it, it would almost be better if it had a different name. [T4A3 Technical Manager interview]*

The routine nature of H&S risk assessment was evident, and viewed as an administrative process, in which academic staff would not be involved. This conflation of H&S and operational risk has implications for understandings of responsibility, and was apparent in all groups.

One of the initial difficulties in the DI training session related to the 'Risk Management of Everything' (Power, 2004a), illustrated by the comment.

> *Where do you start, and where do you stop? [T1A3 Administrator/Manager]*

A member of E&F was aware that the operational risk umbrella covers all organisational activities.

> *Everything that we do, or are involved in, in terms of core or non-core business, has a risk attached to it. [T2A2 Manager]*

The wide range of risks to be considered can act as a barrier to assessment, since the task appears too large and time consuming to undertake. There was concern that the scope of operational risk would result in very lengthy documents.

> *We could sit around here and identify 165 risks. [T1A1 Academic/Manager]*

I suggested that the inclusion of a risk should indicate that the Principal ought to be aware of a risk that was being locally managed, if it may result in a negative outcome, or to ask for help where the risk cannot be addressed by local action, responded to by the following comment.

> *Well, he might say 'do you want me to do anything with it?' and we might say, 'no, we are managing it', or 'we really need your support'. [T1A1 Academic/Manager]*

This enabled DI attendees to have a more focussed view of what to add to the list.

> *The way you are talking, our risk register might be limited to half a dozen things. [T1A1 Academic/Manager]*

The attendee proposed a way to integrate the activity with existing business processes.

> *It seems a bit unclear, but what we were trying to do for the college is something that has maybe 5 or 6 things, but we internally review from time to time, maybe a standing item every two or three months about risks and there will be a standard set of them, flood, power, pandemic of some illness or something. We could probably list them, a standard set of things, some catastrophe or whatever, and should there be anything we should add on, should we have a backup, a contingency plan, what would we do if a floor were taken out by fire. [T1A1 Academic/Manager]*

Gathering data from subordinates could use a pyramidal approach to risk assessment.

> *I think what you want from each of us is our top 3/4 major risks. [T1A2 Academic/Manager]*

The DI management team took the opportunity to consider how to integrate risk management processes into existing business practices, indicating acceptance of responsibility for the task.

> *I think that is a reasonable way to approach it, sort of get some initial ones down and then the groups to add their slant on the key risks. [T1A3 Administrator/Manager]*

Explicitly integrating risk management within existing local management forums was considered.

> *From time to time, we should have a standing item of risk. [T1A1 Academic/Manager]*

The DI administrator was concerned with outputs and compliance.

> *I think we will look at our Minute taking, or note taking and maybe more overtly record where we've sort of discussed a risk, but certainly, for me it will follow up, because we do need to sort of use that as a basis to set it down for our documentation to*

provide for the college. [T1A3 Administrator/Manager interview]

The University aimed to achieve an integrated risk management system, and these discussions illustrated a positive move towards that goal, although ultimately the compliance paperwork remained an administrative chore.

The management of opportunity risks may require acceptance of a possible downturn for a longer-term gain.

That is exactly the discussion we have had, and we've probably, without being able to quantify, we probably say we have to take the hit now to get the benefit later. [T1A4 Academic/Manager]

The DI attendees generally took the view that to grasp new opportunities some initial downturn in financial performance might be expected, but that it would be necessary to improve long-term viability. One sensitive area, that could be difficult to add to a widely circulated risk register, was the possible loss of staff over time.

Let's say carrying more staff than we may need because, don't tell anybody, there may be some rationalisation of staff, and there has to be some efficiency savings somewhere, you've got to carry them until some folks retire, or decide to move on and then you restructure, so carrying all the staff may put you over budget on staffing for 2/3 years. [T1A1 Academic/Manager]

In contrast with what might be expected in the private sector, there was no reference to redundancies. Business-planning processes could be used to gain agreement for such deficits.

We will do a detailed business plan that might show a negative for a couple of years before we start showing real growth beyond, we might do. [T1A1 Academic/Manager]

However, a critical evaluation of the emphasis on 'might' suggests the DI business plan would not necessarily be presented this way. The implication was a lack of confidence in the PCT to approve potential short-term losses.

One E&F perspective explained their emphasis on H&S risks when compared to business risks.

> *You know, you can repair things, buildings can be repaired, but obviously, people can't, so we've got to. The people are important, they've got to be protected and looked after. [T3A4 Manager interview]*

This statement reflected the primary aim of E&F to keep individuals safe while in University buildings, providing the impetus for compliance with H&S legislation.

> *It's largely keeping the college out of trouble, or keeping the Principal out of trouble, out of court. [Administration]*

One individual, who was familiar with H&S assessments, suggested that operational risk management should not be difficult.

> *If you look at the college as a project, its activities are a project, then all you do is risk assess it and prepare a risk register, and then you break the risk register down to the individual component parts, in terms of who deals with what, and then you manage it. [T2A2 Manager]*

In addition, the individual, familiar with H&S, felt that the way that Risk Management was presented created an overly complex impression of what was needed.

> *There is a whole lot of sort of 'juju' surrounding it and, you just need the risk register, you need to identify the risks, put a risk register together and then delegate each risk and a way of monitoring that risk to the individuals in the departments and away you go. Over-managing it, if you know what I mean, put some terminology to it and create a science. [T2A2 Manager]*

Other attendees were more aware of the difficulty of assessing less tangible risks and aggregating local data into a high-level document.

In BHS, the complex nature of involving more staff in assessing risk within the organisation was a concern.

> *Once you have to consult with a larger audience that makes it even more complicated. [T4A5 Technical Manager interview]*

The process is less difficult to manage if it is restricted to senior staff, but less information is gathered. The involvement of additional staff members increases time spent on the task, and the cost/benefit to the organisation is difficult to estimate.

The BHS staff chosen to attend the training were not involved in the development of local risk registers.

> *We haven't contributed, because no one has asked us to. [T4A1 Technical Manager]*

People who contributed, in their turn, expected to see the output of the process.

> *Do we get to see the college risk register? Because we don't know what is on it. If they want us to take the training, we should see the register, but it might not need to go any further than that and if you want to see them take it further, then we would be in a position to sit down with staff in our buildings who were interested, and say 'well, look, these are the issues, and do you think there are any others. Have we got it right', but our School's must be set in the context of the college one. [T4A5 Technical Manager]*

The only BHS attendee aware of the risk register reiterated the lack of engagement with the process.

> *We did it just over a month ago. […] I haven't looked at it because I have better things to do. [T4A1 Technical Manager]*

The narratives illustrated BHS risk register completion as an administrative task.

> *It all got left a bit late, and then one of the administrators had just done it. [T4A4 Technical Manager interview]*

This was not an isolated example, and over the period of study, it was the most frequently cited method for risk register completion, reflecting senior management perceptions that risk assessment was H&S related, and the task was delegated accordingly.

This section provides an important illustration of how the interpretation of operational risk influenced participation in the risk assessment process, with significant implications for formal process outputs.

6.3.2 Conflicting Perspectives

The three embedded cases enabled the conflicting individual, group and organisational perspectives to be explored. The DI worked with quite particular system interfaces, tightly linked with external organisations.

> *We're a tripartite organisation, [names], and our executive has to be mindful that they make sure that the perspective of [the University] would, say, get ahead with this [the merger]. From the academic point of view, it is potentially a win/win situation, academically for the Trusts who are part of the organisation, and our NHS streams here, they may see the risk as something different. [T1A1 Academic/Manager]*

This required joint working arrangements and inclusion of partner organisations' perspectives, with control being shared between parties.

In contrast to views expressed in the other 3 workshops, where access to a widely circulated risk register would be welcomed, the senior managers in DI were very concerned about circulation of documented risks.

> *Meetings I have directly with my line manager, in confidence, verbally to say I am worried about the threat or challenge from whatever, and it is registered, but just the nature of the forms, they are not marked as 'Private and Confidential'. Although, it doesn't seem to make a lot of difference whether it is anyway but, it seems a very open process, and indeed, under data protection, etc, could other people insist that they see it? [T1A1 Academic/Manager]*

In DI, increased transparency and public access to data posed a potential threat.

> *If I saw you, as a member of my staff, as a risk to me because of your behaviour, or whatever, I could put down, problem because of so and so's behaviour, and you would have a right to see that. [T1A1 Academic/Manager]*

Conformance with the legal requirements relating to transparency may result in risk aversion, protecting the institution against the threat of disclosure. There is a genuine concern that documenting DI risks could pose a risk itself.

> *The risk of putting it down on paper anywhere, because if it gets out, say, that they are wetting themselves in relation to the prospect of the RAE, or leaving, or whatever. [T1A1 Academic/Manager]*

The control of primary risks gives rise to the potential for secondary risks, such as disclosure of information that generates negative publicity, and is a recognised feature of risk management activities (Power, 2004a).

In the E&F sessions, there were differing views about how limited maintenance budgets should be allocated.

> *But the roofs at the [site name] are leaking, and it gets pushed that way, well, it's funding, the college refuses to put the funding into it. [T2A1 Manager]*

Given the recent refurbishment of this site, it might be expected that the work would have been approved. The 2005 Corporate Risk Register mentioned leaks on the 5th floor as a risk in relation to IT servers. However, it remained a problem at the time of these interviews in early 2007. A hierarchical conflict was evident. To E&F attendees the lack of investment in estates maintenance appeared unacceptable.

> *The lift there again doesn't work properly, the cost for that comes down to minimal cost, I think less than £20,000, […] because it is a very heavily used building, you can't move, you've got staff actually man handling bags of waste up and down the stairs because they can't use the lift, and these are unacceptable risks. [T3A4 Manager]*

But the failure to act indicated locally that the University's senior management considered the risk tolerable. The control of budgets and allocation decisions play a role in selecting which, if any, risk mitigation activities are approved, demonstrating the impact of power relations in the risk management arena.

One E&F interviewee was aware that from individual or sub-group perspectives it was important to demonstrate effective allocations of funds.

> *I suppose there is a risk that we might not be perceived as spending the money as wisely as we could. [T3A3 Manager interview]*

The comment indicated worry in relation to NPM arrangements linked to outsourcing and use of contract staff alongside increased performance measures and transparency. The risk was felt at individual level in relation to job losses, linked to increasing use of sub-contracts and outsourcing arrangements (e.g. Ecovert).

> *I suppose, not to put too finer point on it, there is always the chance that one day senior college management might decide that they could get an outside firm in to do what we do cheaper and more effectively. Which if the reason is because we genuinely aren't very efficient, well that's our own hard luck. If the problem is because of the way the college actually operates … [T3A3 Manager interview]*

This interpretation of the risk was unlikely to be shared by senior members of the management team, who would regard such decisions as reducing risk for the organisation, through a focus on core business activities, illustrating potential conflict between individual or group and organisation-wide risk management.

The multi-site operation of BHS meant that some staff were in old buildings with outdated plant and equipment, whilst others worked in high quality, new and refurbished sites, leading to contrasting views. In addition, some staff were based in buildings managed by the NHS Trust and other organisations.

> *Different for different areas. Well, I'm in a Trust building, and the Trust are responsible for the maintenance, and it's not good. [T4A2 Technical Manager]*

Consequently, for some members of BHS, estates maintenance issues posed a risk to local teaching and research aims; for others in new laboratory facilities there were no such concerns.

The narratives confirmed different risks to individuals, groups and the organisation in relation to the same type of threat, such that a particular risk mitigation plan may be favourable to some, of little interest to others and unwelcome to the rest.

6.3.3 Competition between Groups

In the University, groups competed for access to scarce funding. The competition for resources presented particular difficulties when comparing operational risks in an area, such as DI, with clinical associations.

> *The clinical areas take priority. [T4A1 Technical Manager]*

> *There was a sort of parallel existence for people like me, and the NHS. Then I'm always in difficulty in stressing the amount of risk if a piece of equipment goes down, compared with somebody who is trying to say we need a new life support machine. [T1A2 Academic/Manager interview]*

In this scenario, there was a proper emphasis on medical care and facilities. However, lack of infrastructure investment had a potential impact on business continuity, and to ignore those risks could have unforeseen impact on patients.

From the E&F perspective, the organisation consisted of a collection of sub-groups, with some common views and ways of working, and some major differences. Competition between parts of the University was a recognised feature.

> *The college is essentially a collection of fiefdoms, with everyone guarding their own interests. [T2A1 Manager]*

Another E&F attendee perceived that some groups have more power than others.

> *And then there's a question of the authority of the Department, if you are one or two pegs down the chain […] your decisions won't be supported. [T2A3 Manager]*

The rewards for research excellence influenced the internal power balance between research and teaching through financial authority and control in BHS.

> *Research Divisions have the money. [T4A1 Technical Manager]*

The hierarchical structure was both informal and informal, but more than one attendee supported the view that some areas were more powerful than others. Successful risk management was seen to rely on clear delegation of responsibility and, crucially, authority.

> *But it's responsibility/authority and that is the authority is really, really quite important. [T2A2 Manager]*

In E&F, the limited allocation of funding to maintenance was regarded as a sector-wide problem.

> *I think one of the problems has been, and it's not, [University] is not alone in this. If you go back 10-15 years, what used to happen was, the money would come from HEFCE to the University, and the University would spend as little as it possibly could on maintaining its buildings and its services, and therefore now it is payback time. [T3A1 Manager]*

The case study revealed that research, then teaching, continued to win the competition for funds, following this tradition.

Some of the recent mergers had resulted in gains and losses in different groups. Some had expanded, while others had lost staff. Consequently, some staff in BHS saw another School within the University as a threat to their ways of working, based on the relative power and authority of the groups in the University.

> *I suppose if we were equal in power, then we'd say, 'do what you like mate', but 'don't affect us while you are doing it'. [T4A6 Technical Manager interview]*

Power relations are an important aspect of the ability to act, and is a significant aspect in the implementation of any type of organisational change, including risk management, especially in the selective allocation of limited funds.

Competition with external groups was evident in concern about the organisation's ability to respond in a timely manner in relation to competitors.

> *I think our biggest threat is loss of our competitive edge and perception by other institutions that we're not up to the mark or we are slow to make, well, slow to make progress. I mean, Pay & Modernisation, it's one of those things again, you see, once you get a reputation, it is very difficult to change that around, even though you may be doing wonderful things again, the perception is that we are a little bit slow. [T3A4 Manager interview]*

In E&F, there was an awareness of 'best practice' approaches to risk mitigation actions in external groups related to emergencies, and preparation for dealing with them.

> *I think it is preferable or helpful to have some sort of practical run through, and the NHS, they are always practising, Red Alert, Yellow Alert. [T2A3 Manager]*

Such trial runs enable organisations to hone responses to potential infrequent events. There was little evidence of any such activity at the University in accounts given during the workshops. The individual was aware that other universities undertook such activities.

> *He was in charge of their IT Department. He came in one day and the security men just ushered him into a room, with lots of his other colleagues and said, 'right it is 9 o'clock in the morning and we want to you imagine that the campus, that particular building has been damaged by fire, what are you going to do about it?' and they did a real life exercise. [T2A3 Manager]*

The expressed concern was that the University would fall behind competitors.

This section revealed the presence of individual, group and functional competition for access to funds within the organisations, with hierarchy determining the outcomes, and exposed pseudo-market competition with external groups as an influence on risk identification.

6.3.4 Boundary Effects

Risk assessment relies on interpretation of risk communications in the light of perceived boundaries to authority and responsibility. There was an underlying assumption in DI that where responsibility was not local, other areas were performing risk management.

> *Well, you see, we all rely on each of these departments to manage risk in the way that we all do. [T1A3 Administrator/Manager]*

Responsibility and authority were linked to DI group role.

> *I think they are thinking about it, and trying to think laterally, but I don't think that is our area. I think our area is more looking at our operational needs within the umbrella. [T1A4 Academic/Manager]*

The DI discussions illustrated assumptions that others were responsible, based on role boundaries, despite local impact of risks.

> *We would assume that the Principal and his team are thinking the unthinkable in terms of function of the college, and being able to pursue objectives like the permanent loss of the building, whether that happened to be by flood, falling down or a plane going into it, like the complete collapse of the e-mail system, on a permanent basis, which wasn't foreseen, and yet has had, will have, a major impact on us, in terms of delivery of our distance learning. [T1A4 Academic/Manager]*

During the DI workshop, it emerged that such assumptions might not be valid.

> *I suppose there are a few things we are at risk of that we are assuming that we have some contingency or backup for an activity that we do, and it may not be there. So, that needs some thought. [T1A5 Academic/Manager]*

Lack of communication on the topic indicated to the autopoietic system that no DI action was necessary, and the discussions illustrated extrapolation of the interpretation to mean that others, outside the group, have taken action.

Some internal action taken to mitigate risks was informal, in attempting to exercise influence over others, both within the University and in external groups that interface with the DI.

> *Well, we could get in quick and say when they appoint somebody new; we want somebody that, if we found him overcautious and too many savings in place, we want somebody who is more entrepreneurial or something. [T1A1 Academic/Manager]*

The DI raised an unusual aspect of security threats, requiring reliance on another group in the organisation for mitigation. The discussion concerned squatters in disused areas of the building.

> *If they don't make that a secure area where people can't take the padlock off the door and put a mattress down, it is a risk. It is not going to do us any good if somebody dies up there and we don't find them for a couple of weeks. [T1A1 Academic/Manager]*

This potential scenario was evidence based, in the sense that down-and-outs had been found using the area already. The need for liaison with other parts of the University system to address this concern illustrated that some controls require actions that cross group and functional boundaries.

Within E&F, the influence of partners on organisational activity was an important aspect of risk identification, since they were aware that other sub-groups were often interdependent.

> *We're totally entwined, [University] and the Medical School. I mean, we need them, and they need us, so that any activities that take place on the campus can have an effect on both sides. [T3 unattributed]*

There was an awareness, in E&F, of boundaries between Departments and Schools, acting more as barriers than connecting interfaces .

> *I think it is fragmented across the college. In certain areas it works better than others, and certain Schools. We're central departments, and the old administration, and I know we're now professional services, but the interaction between the Schools and the professional services isn't always apparent, or doesn't work as well as it should. [T3A1 Manager]*

Top-level co-ordination of activities would be necessary to prevent boundaries leading to gaps in control processes.

> *Where should that level of decision-making be made? There is a sort of pyramid here isn't there? So, first of all, there is a decision at Estates strategy level where you say we really need to do this, and this is the scale of problem that will happen if you don't but, then, from where I'm sitting, I see there's a gap then. I don't see the link, and I've been to one of the Estates strategy committee meetings, and there doesn't seem to be a link between that and whatever comes next. [T3A5 Manager]*

The fragmented nature of the organisation was reflected in the view expressed by one E&F attendee.

> *Well, that's what I thought was the ultimate aim; to have some kind of, dare I use the word in the context of [University], joined up thinking, with regard to what happens in an emergency. [T2A3 Manager interview]*

Responsibility for such mitigation was unclear, but was considered to extend beyond the boundaries of the E&F group.

> *Which brings us back to the whole issue of disaster planning, and who is to sort that out. [T2A2 Manager]*

Many attendees felt there was a need for such plans to be prepared by someone, but not their group. When asked who should be responsible for contingency planning, one E&F attendee replied.

> *The Principal, the College Council. [T2A2 Manager]*

Although such incidents had an impact on local groups within the organisation in different ways, responsibility was thought to reside with those at higher levels in the University hierarchy. The question arises as to whether the PCT were in a position to consider how an event, such as central server failure, affected local groups.

Individuals focused on risk within their role as part of risk management activities.

> *We look at the risk that we are responsible for in our job descriptions. So we manage those risks, somebody in academia will go and look at their risk and risk to the students, somebody else will go and look at theirs and there's nothing joined up, that is the problem, it isn't joined up. [T3A1 Manager]*

As this E&F attendee highlighted, the focus for each group is different. Local areas assumed that they did not have authority outside the boundaries of their group, and consequently expected the issue to be dealt with by others, resulting in gaps in the risk management system.

A couple of E&F attendees suggested the use of existing resources within the University to help develop risk management processes, for example, in relation to security.

> *We've got one or two Departments that are also clued up in those sort of areas of risk, which the college could also consult. [T3A4 Manager]*

This type of internal arrangement would cross internal boundaries and require senior management commitment in supporting such initiatives. One attendee observed that the training and this study were good examples of utilising local resources to help other areas across the organisation.

The complexity of co-ordination had increased in some BHS areas because of mergers.

> *The School is getting very, very big now, as well. It is more impersonal, I would say. [T4A4 Technical Manager interview]*

Multi-site working posed additional risks for the group.

> *You don't spend enough time on some sites. [T4A1 Technical Manager]*

Communications necessitated extra time and effort to maintain a coherent BHS group.

> *It takes a certain amount of time out of the day, in that if you are going from site to site, which a lot of us do… you do, I do. [T4A3 Technical Manager]*

The additional complexity of multi-site operation was a feature of the organisation, and this was unlikely to change, even in the long-term. There was a perception in BHS that the associated risks needed to be managed.

> *We try and get people across to swap sites, because when we first merged there was a general feeling in both areas that the other site ate babies there, but trying to work this through, inevitably there's still some tension there. [T4A3 Technical Manager]*

It was difficult to gauge the success of attempts to integrate groups across multiple sites.

> *As I am trying to make it happen, I obviously think it has been quite successful, well, you would, wouldn't I, but you need to talk to people at the lower end to see if they think it is actually real, or not. An effort has been made, certainly. [T4A3 Technical Manager]*

The effort to integrate aimed at merging boundaries between BHS groups that did not previously work together. This type of risk reduction took place as part of normal everyday group activity, and was not triggered by a formal risk assessment.

Descriptive accounts reveal that groups perceived boundaries to their role and responsibility that resulted in gaps within the risk management system, as risks that ran across boundaries were ignored. It was assumed that responsibility for action lay elsewhere, and more surprisingly, others were therefore addressing mitigating actions.

6.4 Acceptable Risk

In all workshops, it was evident that there was no stated level of risk tolerance to reflect organisational risk appetite, for assessment outputs to be reviewed against. Consequently, this section explores how understanding acceptable risk is more complex than a simple comparison between risk value and risk appetite.

6.4.1 Conditioned Expectations

In the workshops, the concept of conditioning revealed how risk assessment needs to take account of blind spots. One DI attendee was aware that existing ways of working were what they were used to and, consequently, unlikely to be considered as risks.

> *Yes, some things, it's difficult for us to see the wood for the trees, because we are head down. We are dealing with issues day to day[…] just because you have been away from it for a while and you come back, you say 'there's a bad smell round here, and we ought to do something'. [T1A1 Academic/Manager]*

The risk posed by external assessments was recognised, and the use of unconditioned perspectives was suggested as a risk reduction measure.

> *There is maybe value in getting someone in from outside from time to time, independently of the visits, as a safeguard. [T1A1 Academic/Manager]*

The DI narratives acknowledged the reflexive nature of responses to the environment, and recognised that someone from outside the group may have a different interpretation of similar information. However, it might be difficult to accept external views.

> *It's a bad morale thing. It is difficult, to somebody else who is auditing us, we teach the way we teach, the way we research, the way we, kind of, conduct ourselves, etc., difficult sometimes to sell this, to say this could be really positive thing if this person came in and flagged up to us, and we'll be big enough to take the criticism that from an external perception we don't get this right. [T1A1 Academic/Manager]*

Group and individual self-image was resistant to change and was loath to accept the possibility that criticism of existing practices may improve

performance; except for groups that have been used to utilising such information.

Awareness of previous funding cuts in DI provided expectations of future events that stimulated identification of risk.

> *It has to be the financial threat, that funding has been pared down, step by step over the years. [T1A2 Academic/Manager interview]*

This concern remained, despite the interviewee's perception of a more stable current environment.

> *The funding for clinical placements, at the moment we seem to be on a more even keel. [T1A2 Academic/Manager interview]*

The funding uncertainties associated with HE generally were exacerbated for areas with the additional concern of changes to Health Services provision. The DI expected future unexpected stimuli from the NHS that formed an important part of their environment. Such changes were expected have negative local impacts, influenced by historical events they were able to recall.

The discussion about a potential DI merger reflected their long history of mergers within the group.

> *All the mergers we've done, we've done 5. [T1A4 Academic/Manager]*

The DI interpreted previous mergers as having a favourable impact on the group's reputation and, consequently, the group was open to, and welcomed, such organisational changes.

There was a view in E&F that the organisation had a definitive character, which could make it difficult to get things done, unless you were familiar with its idiosyncrasies.

> *Love it or hate it, [University] has got a very definite culture which you have to get used to in order to make the whole thing, keep the show on the road. [T3A3 Manager interview]*

The culture of the organisation influenced the way that E&F individuals reacted to and handled risks.

> *No mention of support, because for people to assess risk and then take the risk, they need to be working in an environment that appreciates the way they've assessed the risk and then supports the decision, be it right or wrong, at the end of the day. [T2A2 Manager]*

There was a lack of confidence in senior managers to retrospectively support decisions in the event of a problem. This type of conditioning increased individual staff members' focus on blame avoidance, encouraging 'tick box' compliance.

Site security was a major concern for several of the BHS attendees. Free access to most buildings within the University increased concern in relation to particular threats.

> *Security in all aspects, from the animal lib people to terrorism. [T4A2 Manager]*

One E&F attendee raised the contrast between non-clinical and clinical sites, and linked the resistance to swipe card control to an interpretation of academic freedom.

> *At [name] you have to, because it is a hospital, and the hospital site, you go into the white ward wearing your card, but [name] is non-clinical, a different atmosphere completely. […] It is an attack on academic freedom. [T2A4 interview]*

This view was reiterated in the BHS group.

> *Well, the academics don't like it. We had it all here, when we put swipe in on these doors, and it's the most bizarre interpretation of academic freedom […] because academic freedom, in my mind, is the freedom to research into whatever area they like, not to walk into a building, at any hour of the day, without any restriction. [T4A5 Technical Manager interview]*

Anecdotal evidence illustrated that, although there was resistance to change, when people were aware of the reason for restricted access, they were willing to use swipe cards.

> *There was moaning from certain people when we installed the system, because we had an ex-convict who used to break into one of the labs, smoke, drink the beer that people were experimenting with, and watch television, and it sounds funny, but he left an empty wallet one day, and his discharge papers, which is how we found out who it was, and I mean, I'm out and about, I'm always the first person in, in the morning, and he was in. So, I felt very threatened. I ended up having to go to the security guards and get them to come up with me. That was the push to get the system in, so everybody understood why it had to be done, but if you notice the doors we came through, not the first ones we came through, but the second one, they are basically in the middle of the two biggest Departments. So, to get between a lab and your office, you're swiping in and out, but because people recognised the need for security, they accepted it, with a little bit of whinging and people always whinge. They do get used to it. [T4A2 Technical Manager interview]*

In this case, the local resistance to access control has been reduced or eliminated for the majority of staff through communication that enables the aims of the change to be understood.

One BHS interviewee doubted the validity of reasons for not using swipe card access, citing benefits for implementation.

> *They say, 'oh, it puts a barrier between the student and the academics'. Well, those students who are doing projects in research labs, will get in, because we will give them the access on their swipe cards, for a limited period of time. So, they've got it for as long as they need it. If they want to see their academics, and, I know we did this, before I came over here. We did it on the [name] campus, so it is the same old rubbish, when it was trying to be introduced, but the college insisted on it, and after about 12 months, people were saying 'this is really good, I'm able to manage my day beautifully now, I'm not constantly pestered by students', and the students aren't complaining that they can't get to see their supervisor. They just turn up and make an appointment, apart from the hardliners who were so outspoken about it in the first instance, they will complain about it until they retire. [T4A5 Technical Manager interview]*

The comment also illustrated that some people are more willing to adapt to change than others. Overall, the resistance to controlled access on several sites reflected a desire for *status quo*, conditioning was expressed

in views that vague negative outcomes would result from changes to existing ways of working.

A short-term approach to funding approval for estate projects was usual and expected.

> *Once we actually put a new building up, we don't commit to say we are now going to keep that in good condition, we basically say, there is no sinking fund, I mean, when we took on the [name] Library, a classic example, I put the budget together for the maintenance of the [name] Library, the first two things that were struck out, without any discussion, were the sinking fund, because that's a Grade 1 listed building, and it's going to have massive [unclear], and the second thing that was taken out was the £30,000 per year for redecoration. [T3A1 Manager]*

This continued a long-standing approach to estate maintenance funding. Since the University was continuing to do well, the risk may be less serious than those responsible, but without financial authority, considered it to be.

E&F staff were well aware the risk of central server failure could be reduced, but were conditioned to irregular disruptions.

> *If there'd been a mirror server somewhere, then at least the e-mail and web could have kept going then, frankly, it would probably have been managed quite well. [T2A1 Manager]*

However, there was no mirror server. In BHS, IT systems were accepted the way they were.

> *You get used to it, that's what you were saying. [T4A6 Technical Manager]*

One attendee raised the interesting idea that lack of money provided an excuse for not taking action.

> *Sometimes it's an easy answer, and glib, 'oh well, where's the money coming from?'. [T3A4 Manager]*

In E&F, money was usually found if there was a legal requirement to undertake estates maintenance. This observation is not unique to the

public sector, one study concluded with respect to the difference between British and German styles of accountability that the British view places emphasis on financial performance objectives, and strategic ambitions are much more important than the repair of a leaking roof (Ahrens, 1996). The continuing reluctance to spend on building projects was congruent with the idea of a system that replicates and maintains *status quo*, in which shortage of resources justifies inaction, with conditioned responses to requests for funding.

Post-training reflection by one BHS interviewee suggested an omission of one of the major potential risks to the University from the workshops: floods owing to the proximity of a river. The risk from rising river levels was not identified in any of the workshop sessions or Phase 1 interviews.

> *Subsequently, I was thinking about this the other day. Although, flood risk, well flooding was mentioned, we never pursued the discussion on flood risk, and yet a lot of the campuses of [University] are right next to the [river] and we've got climate change. [T4A5 Technical Manager interview]*

It was unclear to the interviewee whether this risk had been assessed, utilising Environmental Agency flood maps, to evaluate which buildings were most at risk, and whether contingency plans had been considered. Since there were no anecdotal accounts of previous river flooding, the threat was ignored by all other study participants.

In all workshops, there was empirical support for the idea of system conditioning and the development of an 'immune system' within organisations; long-term low-level risks were ignored, existing ways of working could not be critically reviewed within the system and risks that had not been encountered before were not on the risk horizon.

6.4.2 Existing Management Control Systems

The workshops revealed many existing management control systems that acted to bring risk to acceptable levels in the organisation. In DI,

operational risk assessment covered areas that form part of their normal business activities.

> *We are having discussions about this initiative, and we are not sitting down and saying we are doing the risk assessment today, but we discuss the initiative. [T1A1 Academic/Manager]*

Such informal assessments were not immediately associated with risk by DI attendees.

> *When we discuss any issue like this, we will at least be mentally rehearsing the advantages and disadvantages, the unknowns, the uncertainties, but we don't document it as risk assessment. [T1A1 Academic/Manager]*

Several DI attendees felt that formal risk management processes were not necessary.

> *You would be able to discuss those things anyway, and you don't need the outcome of some workshop. [T1A3 Administrator/Manager]*

As the DI workshop discussion unfolded, participant involvement in the activity became clear.

> *We're indirectly doing quite a lot of risk management. [T1A1 Academic/Manager]*

Control systems that parallel the risk register process were evident.

> *We do actually put key risks in our business plan, our 3-year business plan. [T1 unattributed]*

Lack of integration of the risk register with existing practices resulted in duplication of effort and dual processes.

The business planning process did not reward success or discourage failure.

> *If you take opportunities, you don't necessarily get rewarded for them, and, similarly, if there is risk you get bailed out. Until there is a real business planning process, where you take the*

> *consequences of your risk and then you manage them properly, no one takes them seriously. [T1A3 Administrator/Manager]*

The effectiveness of formal systems represented a form of communication within the organisation, in this case, encouraging DI to disregard processes that had had little or no impact on the group previously. In addition, it reflected the business orientation of DI in their expectation of the way business planning should function.

> *When you do a bid you have to do this sort of cost/benefit analysis, saying, what was the cost of doing nothing? What is the cost of doing this and the cost of doing that? But it is looking at the 2 together and, of course, the college doesn't ever look at those 2 things together. The only time we get a chance to do it is our business plan and, of course, we don't. Nobody looks at that. [T1A3 Administrator/Manager]*

Formal management processes were fragmented, and information was not available to enable decision-making to consider relevant factors; tick-box compliance was evident in the business planning process.

One E&F attendee pointed out that the organisation did little to ensure local compliance with organisational processes.

> *I can't see anybody in the college saying to a member of staff 'don't worry about switching off that bit of machinery, just get in there and sort it out'. We would never dream of doing a thing like that, but where we do have a problem, I think, we are not very well organised in terms of having written policies and procedures, for a number of areas, and where we have got them, making sure we enforce them, and actually do them, and I think my worry is that, touch wood, we have never had a serious accident, all the while I've worked here, and I think that safety records stretches back quite a long time, but if there was an accident, I wonder sometimes just how at risk the college might be to a prosecution. [T3A3 Manager interview]*

In this context, the lack of adherence to, for example, record keeping procedures could have implications for H&S compliance.

In order to establish the acceptability of funding proposals for estates development, one E&F trainee spoke strongly in favour of the use of full life costing.

> *You've got to go through a proper analysis of the whole of that building and talk about the fire alarms, the lighting. You've got to go through the analysis, because nobody is going to thank you when they have spent all this money on the roof and then turn round and say, but then you still need to spend another £3/4 million on the services and stuff. [T3A1 Manager]*

Existing methods used for costing proposals do not include longer-term costs in financial estimates. Yet, these could be significant in terms of overall cost.

> *What are the service implications? What are the disposables for those? Suddenly you find out that this thing, that you've got a £1 million for, has put a burden on you of something like £3/4 million a year and it's 'oh, my God, how did this happen?'. [T3A1 Manager]*

The long-term costs were 'acceptable' by default, when requests were approved.

> *We don't do anything that you would expect to see in a financial institution, which is my background. You don't do NPV, or IRR, or cash flow. [T3 Manager]*

The acceptance of increased long-term costs was viewed unfavourably locally.

> *It's now costing, it saved money initially but, long-term, it is now going to cost the college. [T3A1 Manager]*

At the level of the individual, the risk took the form of having to give bad news to another staff member, if the additional costs were subsequently untenable.

> *I was told that the problem I had, was that I didn't understand what the college were trying to do. That we have to spend the money on these super laboratories and things to get the right people, to get the image of college up, and I listened to the argument, and I didn't have any disagreement with the argument, but the problem I had, was that I was the one that was having to tell this professor, who'd just had all these lasers installed,*

> *'sorry, old son, but there's nothing to connect these to'. [T3A1 Manager]*

The allocation request process required forms to be completed by the requesting staff member, few of whom would be familiar with accounting techniques, indicating a link between capability and responsibility, in this case, for the provision of the appropriate data to enable risk decisions to reflect the organisation's risk appetite.

The use of Service Level Agreements (SLAs) to monitor performance within the organisation was the subject of some discussion in the second E&F workshop. The use of such performance measuring tools in contract arrangements reflected the trend towards use of private business practices within HE. They were perceived to be a potentially useful tool to measure service delivery.

> *We're quite keen on SLAs, but nobody further up has ever thought to ask us to produce one. [T3A3 Manager]*

There was a view in E&F that communication of performance for a given expenditure would increase transparency of what was being provided. However, the low level of funding was considered to set some existing service provision levels below the expectations of the recipients.

> *When we create our SLAs, we say and promise what we will deliver, based on the resource that we have and, of course, the expectation of the residential people, well, we are sure you can do better than that. Well, we can if we've got more resources. [T3A1 Manager]*

A criticism in relation to the use of SLAs, both for internal service delivery and with partners, such as Ecovert, related to the consequences if required levels were not achieved.

> *And we don't have the big sticks that if we don't deliver SLAs, what happens after that? Nothing. [T3A5 Manager]*

The use of performance measures was only seen to be effective in reducing risk to acceptable levels if sanctions could be made.

E&F considered that the most serious risks to the organisation were already assessed and well managed, and the responsibilities cascaded down the chain of command.

> *Some of the biggest risks are probably quite well managed. We do research with things, where if the virus escaped it would probably kill half of central London. Risk will be managed at all levels down to the researcher, so that actually most really serious risks are probably managed very, very well, probably. It's the ones that don't have quite that impact that the college accepts, and somehow they'll get by. [T2A1 Manager]*

The implication was that risk management practices were well established in parts of the University. The attendee was discussing H&S risk and there was no suggestion that such controls were linked to the implementation of the HEFCE risk governance.

One E&F attendee expressed the view that the University's 'risk appetite' was not geared towards taking risks to gain benefits, echoing DI sentiments.

> *The question of risk appetite and the college's risk appetite, I thought that was interesting because it seems to be the buzz phrase at the moment and we do seem to, our appetite doesn't seem to be particularly strong at the moment. [T3A4 Manager interview]*

Existing systems encouraged the local interpretation that acceptable risk was linked to not taking chances or spending as little as possible, and was reflected in narratives describing the senior management as risk averse. Significantly, existing management control systems played an important role in reducing risks to acceptable levels, acting at a remove from the risk register process.

6.4.3 Influence of External Views

This section explores how risk acceptability was influenced by external views. The choice of a merger as the topic of risk discussions reflected the DI response to NPM and the introduction of a competitive market for

students. One of the aims of the merger was to build on the brand image of both institutions.

> *The [name] has a brand image that has been built up over many decades, so one objective could be to try and preserve and secure that image for the merged institution. [T1A2 Academic/Manager]*

The handling of staff issues post-merger could impact on external views of the group.

> *If you get a reputation for asset stripping, the next time you start discussions with another Institution, that comes back to bite you. [T1A2 Academic/Manager]*

The group generally exhibited a keen awareness that external perceptions affected the overall success of the School, including measures such as RAE outcomes. The E&F workshops revealed that it was not only press and media coverage, including league tables, but also the condition of the estate of the University influenced student perceptions. An example of a building closure caused by boiler failure was cited.

> *It is then affecting the reputation of the institution, which wants to be a globally high quality institution. These things don't look good. [T3A4 Manager]*

This illustrated how local aims coloured the interpretation of risks such as reputation.

An E&F trainee observed that growth in student numbers made accommodation of classes difficult.

> *Happens with medical students doesn't it? They're oversubscribed on the medicine, nobody wants to teach them now, because they can't get in the rooms. [T3A2 Manager]*

In an increasingly competitive environment, attraction of both overseas and home students could be influenced by the quality of the University facilities.

> *If you speak to students that didn't come and you actually say to them 'was there a particular reason, we want to improve', and*

> *they say, 'well, I went to the Hall of Residence and it was a complete shambles, and I wasn't going to live in a place like that'. Using the student feedback, that actually not to spend the money is actually costing you, and it could be they could be the next PhD, the next Nobel Prize winner or goodness knows what, and you are losing good people. [T3A1 Manager]*

This E&F comment indicated a lack of awareness of any feedback about the quality of accommodation provided by the University, although this was included in the on-line survey that I completed as a student of the University in 2007 (University International Student Barometer).

The awareness in E&F that external views of well-publicised H&S risks, such as asbestos, could be ill founded, illustrated the difficulty of controlling risks to reputation.

> *We've lived and worked with asbestos for years, particularly at Kensington, it was all over the place. As you say, leave it alone, don't touch it fine, but again [name] magazine gets hold of it, the college is not following its proper procedures. There's asbestos putting staff at risk, and it is blown out of all proportion, and the full facts are not known. [T3A4 Manager]*

An important aspect of this concern was that image and reputation can be tarnished even without valid cause, making the risk even harder to assess.

Security personnel were used as the first point of contact for visitors in some reception areas in the University. I experienced this first hand, when visiting various sites for training and interviews. One E&F attendee described a familiar scene.

> *What a nightmare, the first thing you see when you come in is this sort of bloke sitting behind the desk. So, I asked where to go. 'I don't know'. He didn't even refer me to the proper reception, which is somewhere buried up on the first floor. [T3A5 Manager]*

In my own experience, it could be difficult to find a reception area, with a few notable exceptions. In some cases, the security staff did not know the location of the person you were visiting. The number of different sites and buildings, some of which were quite small, complicated this

issue. The NPM drive for efficiency savings would support the idea of combining security and reception roles. However, an unintended outcome was a negative impression for visitors to some sites.

In BHS, negative reports in the media constituted the main threat to reputation.

> *Bad press, I would imagine, because of losing things like the Biology and things like that. That's what I would think, because it gets back, doesn't it, to other students, prospective students? That would be my main concern. [T4A4 Technical Manager interview]*

Damage to reputation could be exacerbated by public opinion about particular issues. In the case of the use of bodies for medical studies, one interviewee identified public 'dread' (Slovic, 1987) in relation to the subject.

> *People are so sensitive now about bodies, there is an area of that, I think, could lead us into great problems. [T4A3 Technical Manager interview]*

The attendee had particular concerns about the availability of bodies for training purposes.

> *Well, it already is a problem that is real and there already, where we used to, years and years ago, have about 6 students to a body, we're now already up to 12 students to a body. [T4A3 Technical Manager]*

The qualification of medical professionals was of public concern.

> *You don't want a surgeon chopping you unless they have been on a body before. [T4A1 Technical Manager]*

Another area in BHS that was thought to be unacceptable to many of the public was genetic research.

> *The thought of making babies out of pigs, is something that … and there are groups that do that here, well, we don't do exactly that … [T4A3 Technical Manager interview]*

These provided particularly good examples of how local perspectives reflected concerns that are irrelevant to other Schools. Nonetheless, should one School receive adverse publicity, it may have an impact on student recruitment that could result in increased risk to the entire organisation. Coincidentally, on a recent visit to another university, a poster campaign to encourage body donation dominated the main entrance hall, perhaps indicating this risk has stimulated senior management action in a competing institution.

It was not only the quality and maintenance of University buildings that was considered a potential risk in terms of external perceptions of the University; the shortage of lecture space in BHS was also a problem.

> *And feedback, top up fees, and they go back to their Schools and say 'I wouldn't go there, I sat cross-legged at the front of the lecture theatre, because there was no space'. [T4A3 Technical Manager]*

Despite criticism in the E&F workshops of the funding of new buildings, a shortage of teaching space was evident.

> *Everybody wants more. [T4A3 Technical Manager]*

Much of the equipment in use in the BHS was quite old, adversely affecting the attraction of new staff and students when compared with competing organisations.

> *It is not actually up to date, and they are using geriatric equipment. If we had more up to date equipment that they would use if they went outside the research environment ... [T4A4 Technical Manager]*

External views influenced internal perceptions of the organisation, reflecting self-referential expectations of others in the competition for staff and students in a competitive market place. An unexpected finding was the local slant placed on risk concerns in relation to reputation.

6.4.4 Degree of Control

This section examines the relationship between acceptable risk and the ability to control it. The successful DI merger with another organisation relied upon the actual management of the integration, illustrating the importance of control within risk management activities.

> *But the risk is actually turning that opportunity into a practical one, from a theoretical to a practical, because actually running a fragmented organisation could actually lead you to be less effective and so, you have to give serious thought about how you structure that, getting people together, so you can see an objective of the advantage of getting all the staff together, critical mass, and so on, but if you are suddenly working now on 3 or 4 or 5 sites, we already have experience of that ourselves, and that actually presents particular challenges and actually fragmentation, so I would have thought that following on from that, we've got clear financial risk. [T1A4 Academic/Manager]*

To achieve the DI merger successfully it was necessary to exert control to ensure that staff did not view the change negatively, and chose to leave the organisation.

> *Somebody is leaving the potential sinking ship, and if we don't merge with a going concern and key people have moved away before we clinch the deal, yes, we could acquire something that is diluted down. [T1A1 Academic/Manager]*

The ability to manage staff perceptions in both organisations before a merger was important.

> *I think a loss of staff would be a key thing, because there is such a long run in period, if we agreed the money today, we wouldn't actually get together physically, in whatever formation, for a number of years. That's a long time to keep staff, unless you have a particular strategy to excite and get people on board and convince them that they've got security. [T1A4 Academic/Manager]*

This emphasised the role that time plays in risk assessment. If the merger were planned in the next couple of months, people would not have time to leave, but a longer period increases the uncertainty about what staff will choose to do, and it is unclear whether this poses a severe

threat to the initiative. Previous DI experience has highlighted the need to ensure such mergers are well managed.

> *Once they got to know each other, and the fear factor had gone, that was a very well managed merger, and if you look at the income of the two in combination, the two Schools, I suppose a few years afterwards, where the income of [name] had gone up by about 300%, it was extremely successful. Now, in the same time as the two hospital merger of [name] and [name] which was a disaster, and had less business, which has actually carried on.*

After considerable discussion in the DI workshop, one attendee summed up:

> *On the balance of probability, assuming we cover the business planning process and we cover the safeguards, the impact is going to be on the high side of things, and the risk of it becoming a complete balls up is relatively low. [T1A1 Academic/Manager]*

However, even with a high degree of control the possibility of things not going according to plan was accepted.

> *Although we will do careful business planning before we finally commit ourselves, there's many a slip between cup and lip. [T1A1 Academic/Manager]*

Within E&F, the narratives illustrated that access to resources was an important factor in relation to risk mitigation action.

> *You can only tell them what the solutions are. You can't make them spend the money. [T3A1 Manager]*

Delegation of responsibility needed to be accompanied by appropriate authority.

> *Part of managing risks and dealing with the whole thing is empowerment, as well. Does that come into this? It's that whole balance, actually. [T2A2 Manager]*

Within E&F, lack of clarity about responsibility for risk management extended to the long established H&S system.

> *The College Secretary said 'well, there's the Principal, you are the one that goes to prison' he said, 'well no, couldn't be me, must be H&S', and H&S say 'oh, no, I've delegated that to*

Estates', well 'it can't be us', and then it goes round and round. [T2A2 Manager]

The picture of assignment of responsibility and authority emerging from E&F shows confusion among staff members about management of many risks, both in relation to existing control processes and recently implemented risk governance. Another E&F anecdote revealed the lack of formal lines for responsibility in the event of a problem.

When there was a previous regime in the college and there was a problem in one of the labs, and somebody was injured or killed, and basically the senior members of the college turned up and spun a bottle to find out which one, who was to blame, and then that person had to go away and sort it out. Or, if you weren't quick enough to get to the meeting, and you were absent or on leave, you were the one. […] It was hopscotch really, to try and make sure that it didn't land on your plate, which is not the right way of doing it. [T2A2 Manager]

Another added.

I'm not the risk manager at the moment. [T2A1 Manager]

When responsibility is assigned after an event, there is little opportunity for risk prevention; the group for individual would not treat information on the topic as a stimulus to action.

A potential E&F hazard within the University illustrated the need for planned and regular monitoring of some risks.

Now the problem we have with asbestos is, if it's assessed and it's in very good condition, but lets say it is not mechanically protected, what could happen in that situation is that it is given a very low risk, because it is not damaged in any way, somebody comes along with a trolley, gauges it, it immediately goes up from low, straight up to high, so again in looking at that, some people would say that that needs to be protected and additional measures taken, or it needs to be removed. [T3A1 Manager]

The chosen mitigation action provided an example of 'satisficing' (Simon, 1997a) in which an acceptable solution had been found, and although it was not optimal, the search for other solutions ceased. The mitigation provided evidence of compliance with external requirements,

demonstrating control. The easy action was to monitor the issue, using in-house staff, a hidden cost, since other options required funding approval.

Once a risk had been communicated and the issue ignored, for the individuals concerned it seemed unfair to have to deal with negative outcomes.

> *If I was in the Principal's shoes, you would not be in a position where, with all these demands that are being made, it would come down to priorities, it would come down to risk. The only problem I have is where you advise them that this risk is there. It is real, it is going to happen, and when it does happen, the first thing that happens, they go 'well, what are you going to do about it?'. [T3A1 Manager]*

An important aspect of control is the ability to plan. E&F revealed a lack of planning associated with room allocation requiring *ad hoc* and last minute arrangements.

> *At the moment there is no clear strategy of where these people are actually going to go. [T3A4 Manager]*

The existing procedure for recruiting new staff did not require an appropriate space or facilities to be designated for them.

> *I'm looking to recruit someone, and in my proposal to HR, there's nothing in there that says where you are going to put them. [T3A5 Manager]*

Once again, this E&F risk could only be managed by balancing some needs against others.

> *It is an absolute nightmare, robbing Peter to pay Paul, the space; you can't move anybody in until somebody else moves out. [T3A4 Manager]*

In this process, there was reliance on local management to juggle requirements in a reactive manner, with little or no emphasis on planning.

Within the E&F Department, there were concerns about the ability to control activities in Halls of Residence.

> *We do have some good ones. They are expensive, but the kind of issues that we have in Halls of Residence are things like, well, one of the big topics at the moment, is the number of false fire alarms. [T3A1 Manager]*

In addition to such nuisance issues, there were safety concerns.

> *The other issue is with students falling out of windows. So, again, there are regular checks on the windows to make sure that they can't, because the little darlings dismantled the windows and the safety devices, and things. [T3A1 Manager]*

Such checks had been introduced as a risk reduction measure, increasing the degree of control. The attendee did not suggest that a formal risk assessment activity culminated in these checks.

During the course of an interview, one E&F attendee expressed the view that even with appropriate controls and mitigation measures, risk could not be eliminated.

> *You put all these things in place, you've still got some risk and what are you going to do about that? [T4A6 Technical Manager]*

The comment revealed uncertainty about what constituted 'acceptable risk' to the organisation.

A BHS attendee suggested that inappropriate assignment of responsibility for current processes that contribute to risk management results in unacceptable levels of risk.

> *But I think that's just scandalous that, emergency planning like disaster planning is something that needs to be done, I think in security issues it needs to be done by our Health & Safety Department. The College Health & Safety Department, who farm out the policy and practice, to the individual Schools, who can then adapt them. It is passing the buck. [T4A5 Technical Manager]*

Despite this 'buck passing', there was no indication that the individual considered preparation of such plans as part of the role or responsibility of the BHS, and the resulting risks were considered unacceptable. Specialist experts were interpreted as holding primary responsibility for H&S (Hutter, 2005), and in this case, their role was perceived to include disaster planning and security, thwarting the delegation of line management responsibilities to local groups.

The increasing number of students in BHS placed additional pressure on existing control systems.

> *So, something like 1,500 undergraduate students, […] so if we needed a one to one relationship with them, we would be failing; 40:1 we would still be failing. [T4A3 Technical Manager]*

The ratio of staff to students limited available supervision time and increased the risk of equipment damage, in addition to concerns about teaching quality. Some accidental damage to equipment routinely used by students during classes was expected.

> *They all play with it, they sit around and fiddle with it while they are being lectured to, and then you end up with broken equipment. [T4A4 Technical Manager]*

However, an example of suspected deliberate damage was given, highlighting the difficulty of overseeing the use of kit.

> *Yes, but, we've just had an incident where, someone has been sabotaging equipment, in the cardio-vascular group, and each time they've done it, it is a couple of thousand pounds a time. [T4A5 Technical Manager]*

Detection of this type of malfeasance was difficult with large numbers of students and, in some areas, lack of entry control. In the event the culprit could be identified, the problem remained difficult to deal with.

> *They haven't got any hard and fast evidence, but they have been monitoring this particular student, and they've found that each time he is in the building this piece of kit gets damaged. [T4A5 Technical Manager]*

The possibility of wilful damage or misuse by students was not raised as a risk in any preliminary interviews, nor in risk documents, but was suggested by two groups in the workshops.

The workshops demonstrated variability in relation to IT within the organisation. Some attendees acknowledged the use of local systems to mitigate poor central IT support.

> *Well, it is mainly because there is a dedicated staff employed within our School, to deal with the sorts of risks and problems that crop up. If we didn't have those staff, it would have a bigger impact, because we would be struggling to find somebody that could solve the problem. They don't really do, they don't come over to the Schools. [T4A5 Technical Manager]*

The statement illustrates that action to increase control and reduce risk had been initiated locally without use of the risk register. The experience of a flood in one area of BHS had resulted in arrangements with another organisation to prevent similar difficulties in future.

> *On major risk assessments, the sort of cataclysm that happened - that this building opened with a major flood. Teaching, the flood knocked out all the electricity for some months, so you can imagine. So, since then we actually have a reciprocal agreement with another college. It has not been tested, but we would teach in the evenings and weekends, at another college and, equally well, if that happened to them … this is actually agreed for medicine, mainly medical teaching, but, well, I think we were honed to it by, I can't remember how many weeks this building didn't have power, but it was a long time. [T4A3 Technical Manager]*

These local arrangements indicated the ability of groups to initiate change to reduce risks, by increasing degree of local control. No use of formal assessment process was suggested as a trigger for these arrangements.

The findings confirm that the authority to exercise control and mitigate a risk was an important influence on risk acceptability. Furthermore, the introduction of local controls can reduce risk to the group.

6.5 Uncertainty in the System

The exploration of the ontology of risk forms the basis for this research question. The link between socially constructed aims and risk, and an understanding of the broad nature of operational risk leads to the conclusion that there is little available statistical data to work with, and assessment has to cope with an environment of uncertainty.

6.5.1 Risk Assessment Output is not a Form of Measurement

Since risk registers were the tool used to manage risk, it was important to establish the validity of the assessment process that provided the inputs to these documents. An aspect of risk that was difficult to quantify related to the continual uncertainty about future access to funding.

Reliance on external funding and the tight budgets that the organisation worked with created a significant source of risk.

> *One greatest threat, I think, is there not being enough money to go around, and that could be because we are facing increased energy costs, or there's always the possibility that one day Gordon Brown might get out of bed in the morning and realise he's got his sums wrong, and a lot of the funding we rely on vanishes. [T3A3 Manager interview]*

Future funding levels were a major source of risk for all participants in the study.

> *The possible insecurity of the funding stream coming through from the hospital side, on which we depend. [T1A4 Academic/Manager]*

In this statement, the use of the word 'possible' indicates inability to even assess whether this insecurity existed. The link to the NHS brought additional possibilities for unexpected change, linked to NPM performance management.

> *Well, something like a risk from the NHS may have another barmy scheme of targets or something. That's not inconceivable, totally unpredictable. You would watch the 10 o'clock news and the Health Minister suddenly says 'all patients have got to be*

treated within 24 hours' or something. [T1A1 Academic/Manager]

In DI, risk was also associated with uncertainty about personnel changes.

If you were to say 'what are the implications of [name] handing his notice in?'. Now, it could be from a wide spectrum of things, good that the guy's gone because he has given us a hard time with overhead and we'll get somebody new and it could be a positive, who says 'you are giving a bad time to the Dental Institute with a £2m overhead. We've got to deal with them fairly', or you could get somebody who is even more draconian, and it will probably change. Someone will come in with a different approach to it, no doubt, it won't be the same animal, it will be somebody different, so there is a risk of change, one way or the other. [T1A1 Academic/Manager]

This comment revealed the complex nature of change in day-to-day activities in relation to risk assessment. It was very difficult at the time of assessment to estimate whether such changes were beneficial or detrimental.

If you get a new Chief Executive who came in and said 'enough of this we are going to buy all our pathology services from some commercial lab somewhere', there might be some real problems for us. [T1A1 Academic/Manager]

Changes at a high-level in the hierarchy could result in significant risk for other individuals in the organisation.

The difference between the assessments of one-off risks in DI against recurring events was considered a difficulty by one attendee.

So, the frequency of the [merger] is a one off, but for other things, do you sort of consider the risk to your reputation, from all these things, the general risk and then sort of say, there could be something every month, a person going off the loop and doing stuff, but you see the actual impact would be different depending on which one it is. [T1A3 Administrator/Manager]

The training session advice suggested a scale from Low (once per 10 years or greater) to High (once per month, or all the time). The problem arose about how to consider a one-off risk that was a planned opportunity.

> *Because it is a one off issue isn't it? I'm just saying, how do I record a one off thing? [T1A1 Academic/Manager]*

The type of opportunity risk being considered would be planned, and is not unlikely to occur simply because it was low frequency. This raised the question of how to include such risks on the frequency scale. The attendee expressed difficulty in comparing risks that were expected at some time, and one-off risks.

> *From time to time, there's a flood, so, it might be category 3 because we just expect a flood once a year, or something, a major flood that wipes out … but something like the [merger], or the movement of our funding in the Health Service, are one off risks. [T1A1 Academic/Manager]*

Two examples given of one-off risks were different in character, in that the merger was planned and reduction of funding arose outside the system. The movement of funding could be accommodated on the suggested scale, perhaps as being likely every 5-10 years, in contrast with the difficulty of using the scale for a one-off event that was very likely to occur. In addition, one DI attendee found the scale difficult to use for low-level risks that were ongoing.

> *The other thing that that doesn't record is something that's continuous, if you like, high probability, but low risk, like deterioration of estates. [T1A2 Academic/Manager]*

This reconfirmed that participants ignored long-standing low-impact problems, especially since the model did enable an appropriate rating to be assigned.

One of the interesting interrelationships to emerge during the DI workshop was an increase in the impact of some risks when the frequency of the event increased.

> *If we had riots among the students occurring every month, the risk to our reputation would be such that we might get funding withdrawn or students may not want to come here, and so the effect of the impact on this would actually be great. [T1A2 Academic/Manager]*

During this risk assessment, the impact scale was confused with the frequency scale, and this was evident in one or two other examples. Interestingly, this type of mixture was present in the course material before it was updated for the workshops, illustrating how easy it is to confuse these concepts. The process was complicated and confusing when participants included frequency within the impact descriptions.

One DI interviewee felt that it was difficult to put numbers for frequency and impact against operational risks.

> *It was quite testing to put numbers onto everything. [T1A2 Academic/Manager interview]*

The comparison of different risk types or groups with DI presented some difficulty.

> *How do you quantify a risk and then compare different types of risk? I can see the practical difficulties, but I don't see any way around. I mean if you try and do it in words then you are still up against the problem of comparables. High risk is that the same in my area, which is the laboratory field, if we're asked about a risk relating to patients? [T1A2 Academic/Manager interview]*

In addition, difficulties remained whether numbers or words were used in the assessment.

Within DI, the differing emphases on risks suggested a need for ability to compare local outputs with each other.

> *When you are comparing it with other people, and if their understanding is the same as yours, and particularly in the college, and even in the Institute, if, say, it was research focused or teaching focused, but if you are putting the 2 together then see how far apart everybody is, that would be very useful. [T1A3 Administrator/Manager interview]*

This was difficult without an ability to assign good estimates of financial loss (or gain) for operational risks.

> *Whether the interpretation of them is the same, so if everybody knew a 5 was an impact of £x million, but obviously if we all put*

different figures in, it's a problem, but with caution it could be useful. [T1A3 Administrator/Manager interview]

The same attendee felt that numerical assessment did not assist in everyday business.

For day-to-day use, I don't think it is very helpful. I think you do that in your mind anyway. [T1A3 Administrator/Manager interview]

E&F attendees were aware that gaps in data and information exist.

We are not in possession of all the facts, are we? [T2A2 Manager]

There were examples illustrating the difficulty of assessing the cost of building closures, where losses were not limited to the cost of corrective action. Failure to maintain or replace plant that was past economic repair incurred costs through loss of productivity.

We have had several heating failures at the [name] where we've had to send sort of 2,500 people home and shut the building for 2 or 3 days, but is that acceptable? Is that an acceptable risk? [T3A1 Manager]

There was uncertainty about what constituted acceptable risk linked to the inability to quantify the cost of such failures. This raised one of the significant themes that emerged, the acceptance of risk by default.

One E&F attendee expressed the idea that assessment was futile, since you could not know all the risks that may occur.

The known knowns and the unknown knowns aren't the problem, it's the unknown unknowns that are the problem, because they're the one's that most dramatically affect your business, that you don't know are coming sort of left field. [T2A2 Manager]

Interestingly, in the workshop on that day, there had been several discussions that included incidents recalled by attendees, all of which were reasonably predictable, and there was little evidence of 'unknown unknowns'. One example was the loss of a central server for a second

time, disrupting the web site and e-mails, the risk not having been mitigated in the interim.

One E&F attendee illustrated how assessment of risk was a matter of judgement.

> *If I close the building, you know it is serious […] because sometimes you have to take a stand, because unless you do, people will think 'oh, you just go along with it'; but you have to be able to live with the decisions you make, and a lot of the decisions you make you base on 'if it was my child' in those situations, and would I allow it to go on, because if you wouldn't, you shouldn't be doing it to anyone else's children. [T3A1 Manager]*

The basis for the decision-making in this example lay in the personal values of the individual concerned, and pointed to the need to accept the use of such qualitative assessments in the absence of numbers to crunch.

A DI attendee observed that differences in individual risk tolerance influenced risk identification and assessment.

> *People differ in their willingness and comfort and ease with which they can live with uncertainty. Some people like everything to be just so, and other people need a certain level of …, a bit of edge. [T1A2 Academic/Manager interview]*

The view was confirmed by an E&F attendee.

> *Also, in a more general sense, anybody's assessment of this depends on their own risk appetite, doesn't it? [T3A5 Manager]*

What is tolerable to one may seem very risky to another. One E&F attendee expressed quite high-risk tolerance.

> *You would hedge your bets, apart from the bulk of the campus blowing up; you'd probably find it quite difficult to move into the high … Somehow Glasgow survived, City survived it, even Hampton Court has survived, and Windsor, with the odd fire. [T2A1 Manager]*

Other individuals showed more willingness to consider rating risks as severe, but since no risk ratings were agreed during the workshops, resolution of such differences was not revealed.

There were indications of reliance on qualitative evaluations in E&F, even in relation to H&S.

> *It comes back to experience, to knowledge, to really evaluating, and even if it is on the hoof, actually evaluating, what could go wrong, and if it were that serious, I mean we've only, well since I've been here, 17 years now, but in that time, we've had one fatality. [T3A1 Manager]*

The availability of personal experience enabled a historical perspective to be taken for some risks. There was little data available to inform operational risk discussions. One E&F attendee identified some information that could provide useful input to the process.

> *There is a limited way you can pickup the student end of it, because of the student satisfaction surveys, and that is one of the key items in the strategic plan. The happier they are, the more they come back apparently, and this may be an overall measure of that. Somewhere, but that would be almost impossible to pick up across the college. [T3A5 Manager]*

Although the individual was aware of the survey, there was hesitancy about where the data exists, and whether it would prove comprehensive enough to be helpful. However, for some operational risks, data was available to assist in such calculations.

> *So, things like accidents; you know exactly how many you've got, the cost per square metre basis for both utilities and maintenance, the number of calls that we field and did we do it in the response time? All those things are factual. [T3A1 Manager]*

There was no evidence of the use of any such data in any of the workshops.

One E&F attendee was well aware of risk assessment methods before attending the training and was aware that some risk ratings were easier to have confidence in than others.

> *I actually wrote the risk assessment policy for the Department. So, that's a document which is medium, [...], if you start getting close to the edges, I'm worried about the edges because it is a judgement call. The medium that on 2 and 3 in there, I am comfortable with because there are at least 2 mediums the other side, but as soon as you start nudging up against the highs... [T3A1 Manager]*

The banding on the rating grid provided a wider target when similar ratings were present in adjacent cells, so that expectational ambiguity increased the likelihood of assessment outcomes being correct. The comment also served to highlight the fact that part of assessment relied on judgement, and consequently reflected individual or group perspectives.

In the first E&F workshop, it was observed that certain combinations of events raise the impact of a risk.

> *I think today is the day that they do the salary run, I mean, that could have an impact on the whole of the staff not being paid on time. [T2A3 Manager]*

The need to consider a wide range of risks, and the accompanying circumstances, added to the complexity of risk assessment. It was akin to having a programme in which 'if' statements increase or decrease risk by a certain factor. In this case, the impact would have been rated as more severe, if it had prevented the salary run proceeding as planned.

For one E&F interviewee, there was a suspicion that the qualitative aspects of assessment mean that different ratings would be given by the same individual at a different time.

> *You often find that you actually go back and say 'here's a blank form, remember the course you did, fill it in again' you'll probably get some different answer, which is why I am convinced*

> *a lot of people put all 5s, so that they don't have to worry about getting it wrong. [T3A1 Manager interview]*

There was an underlying issue within this statement in relation to blame avoidance. If people chose high numbers to avoid being wrong or bearing responsibility for assessing a risk at a lower rating than was subsequently made evident, that would make distinguishing between serious and minor risks more difficult.

The influence of local interpretations of risk on assessments was emphasised by one E&F trainee.

> *I think there must be some grading and I think probably, for us to have done it on that course was quite difficult, because you don't know whether you are comparing apples with apples or apples with pears, and everyone has different views. But I think, if you're taking the bigger context, I think it might take somebody, almost, not with an external view, but somebody with a bigger view of all of the college numbers to get them into some perspective, because locally you can have all sorts of things, which to you seem absolutely like the end of the world and you can say it is 10, and actually really it's somebody else would say 'well that would be a shame', but there are other things which you might think 'oh, that's alright'. The e-mails went down, 'oh, well, oh God, that was good, we didn't get any e-mails for the day' is actually catastrophic to some others, so I think it is difficult again, because you've got your own perspective. [T3A2 Manager interview]*

The trainee observed that local perspectives of organisational risk reflect genuine concerns (Adams, 1995).

> *You take the view of how it impacts on you and your view of the organisation. So, obviously, I think that's what is difficult, but it is useful to see how other people view risk, because people don't just make it up, I mean, there is obviously a reason that they've said it. [T3A2 Manager interview]*

Another E&F attendee provided confirmation of the qualitative nature of the assessment, with reliance on local views.

> *People make a judgement, but it is perception, at the end of the day. [T3A1 Manager interview]*

These statements supported the view that operational risk ratings were not true risk probability calculations.

An illustration of how difficult it was to make a quantified financial estimate in relation to risk was evident in the discussion of the impact of the lack of planning during a recent closure of one part of the campus, during which it was unclear who was in charge of the site.

> *Someone who is there who's got access to all the procedures and access to all the people who are involved. Not just someone coming 'oh, no, so and so is off sick today', or 'she's on holiday' and so the junior porter is responsible for the site. It should not really happen. [T2A2 Manager]*

Another attendee at the same E&F workshop expressed an alternative view that, even if it was clear who was in charge, it may not alter the event's impact, except to improve the way the incident was perceived.

> *... except the cuddly feeling. Well, I think it would just have made it all a little bit more managed, and would have given a better impression. [T2A1 Manager]*

It would be difficult to assess what, if any, additional costs were incurred owing to lack of established procedures. Furthermore, in planning for events such as a major fire, there are costs involved in preparing for such an incident, and if it never happens, the organisation is right to adhere to fire safety guidelines, and hope that it doesn't happen. The effect of time is to make the outcome unpredictable in the present (Luhmann, 1998).

The cost of preparing for serious incidents can be difficult to justify in the absence of financial estimates of potential losses. Cost avoidance was cited by E&F as a reason for the lack of progress in this area.

> *I had two sample emergency plans created, one was for an office/academic building and one was for a Hall of Residence, because of the differences, just basically to give an idea. Those plans, when people saw them, because basically when you open the emergency plans, one side was covered with text about all the persons in the building, what to do, the other side was all drawings, so the two, you've got the pages matched up so what you were reading here, you were looking at there, right. Went*

> *back to the college and said, right, we'd like to do this for every one of our buildings, how much are they? They are £3,000 each, and they are the only two emergency plans that ever got completed. [T3A1 Manager]*

Once again, it was impossible to calculate whether expenditure on emergency planning would save money in the longer term. It was not possible to re-run events over the previous two years and compare balance sheets. Interestingly, the group did not use the examples as templates to produce others themselves.

In BHS, one attendee perceived a difference between the assessment of H&S and risks that arose when the broad range of threats to business were considered.

> *The examples, you've gone through, are very tangible things like the equipment, but there are a whole range of other ones that are much less tangible. Where the college's good name may be called into doubt, I mean, things to do with the Human Tissue Act. Things to do with, for instance, if anything is likely to go wrong there, somebody comes in and sees their granny embalmed. This may, all those things are much more difficult to tie onto these. If we lost a body, an example that has nearly happened, is where the undertaker actually brought the wrong body, and it was within a gnat's whisker of being shaved and embalmed, because all the paperwork was correct, it just wasn't the right person. Now, if those sort of things came out into the public area, it doesn't fit very easily into that sort of thing. [T4A3 Technical Manager]*

Another BHS trainee commented that qualities, rather than quantities, might be more appropriate to the assessment of operational risk.

> *I think it was quite tricky putting a number to what I would have regarded as a reasonably tangible risk, like H&S risk. Whereas, with a financial, business risk, I think it is even less tangible, and you just wonder, if you are, when you started talking about the gap on either side of those numbers, I was thinking, well this is fitting into low, medium and high. [T4A5 Technical Manager interview]*

This comment supported the view that operational risk assessment can be considered qualitative and described by words, rather than numbers. One central server failure was cited as costly.

> *Oh, the server, that was another thing. I mean that was very expensive. [T4A3 Technical Manager]*

Another BHS attendee knew that costs associated with flood risks were high, but was vague about numbers.

> *I mean, what was the cost? It was in many, many millions. So it was a severe, it wasn't just a, something that just happened and the ceiling fell down, it was very severe. [T4A3 Technical Manager]*

The actual figures were not known for either incident, contributing to uncertainty about the financial impact of risks.

One BHS attendee expressed the difficulty of assessing the risk when balancing conflicting organisational aims.

> *We are a research organisation, but it still does teaching and, yet, if the people who are involved in teaching… there is always tension, I don't see how you do assess the risk. [T4A3 Technical Manager]*

A further difficulty arose when attempting to predict future developments in knowledge, particularly when dealing with novel materials.

> *Something you've been doing for many, many years, as long as it doesn't go wrong, there is no problem. So, if there is an experimental technique which goes on for years and years and years, and then suddenly you find out all the workers there, because they have now discovered this chemical was actually a very severe carcinogen, which shows after 10 years, the college would have tremendous difficulty, what do you do? [T4A3 Technical Manager interview]*

This particular risk falls into the H&S category; such an assessment could only be made in the light of available evidence. These assessments are more likely to be based on epidemiological data and statistical techniques than most operational risks, and could be considered quantitatively valid. Nonetheless, should such a change in the state of knowledge occur, the University would still have to deal with the aftermath, particularly in relation to staff who fear an increased threat of

cancer. So, even when assessing a relatively quantifiable risk, the unknowable future can make assessments potentially unreliable.

The presentation contained risk severity categories for some risk types, but was not exhaustive (see Appendix 4). One BHS attendee queried why some categories of risk did not appear in the severity assessment matrix.

> *Where does security fit into that? Security issues? […] It doesn't fit squarely on there. [T4A5 Technical Manager]*

The course emphasised that since different types of risk were being assessed, the impact scale would need to be tailored to the threat being considered. In the case of security, severity ranged from petty theft, through staff assault, to terrorist attack.

The recomended financial loss scale was inappropriate.

> *It is quite interesting because the low risk of financial loss is set at <10k. Which actually is the limit that's the excess on the college insurance policy. [T4A5 Technical Manager]*

In this instance, it would be better for an area to lose a piece of equipment valued at £15,000, and claim against the insurance, than one valued at £8,000. Consequently, if financial values can be calculated, the risk scale needs to be considered in the light of University insurance arrangements.

In addition, another BHS attendee observed that the financial impact at different levels in the hierarchy could result in additional modifications to the assessment scale.

> *I think it is very arbitrary, I mean, you were giving examples, where […] costs of equipment lower than £10k and you were saying you could change things, I mean if I can change things individually, I don't understand, how can I really compare my number to somebody else's number? So, it has either got to be the same, or we are ending up with multiple scales, kind of thing. [T4A2 Technical Manager interview]*

For an integrated risk register, variation in the setting of such scales reflected hierarchical impact, but resulted in systematic assessment differences.

> *For the individual, if they have lost a piece of equipment because something has fallen over, there is no insurance cover for them, and, yet, that has a major impact on potentially what they do. [T4A5 Technical Manager]*

Since small losses can have large impacts on individual research projects, a single financial scale for the whole organisation was inadequate to express local difficulties encountered because of an event. However, since the narratives illustrated the difficulty of estimating financial loss, a tiered approach would not assist in ranking many risks faced by the organisation.

The narratives illustrated many forms of uncertainty in relation to operational risk, a lack of confidence in available data and unpredictability of the actions of others. Unknowability in the Keynesian sense was present, and risk assessment outputs could not be considered a form of measurement.

6.5.2 Uncertainty Surrounding Aims and Objectives

The emphasis on achievement of organisational aims suggests that any ambiguity or lack of clarity about objectives will have a serious impact on risk assessment, as well as strategy implementation more generally. In DI, the risk register process was linked to strategic issues, rather than day-to-day concerns.

> *If you said to me an operational risk register, I feel threatened because I don't get sufficient support from personnel or something. That's an internal risk, because I think that somebody is not supporting me, but a strategic risk register, I'm worried about the RAE and so on, funding or something, I'm much more concerned about recording those issues, rather than operational risks. [T1A1 Academic/Manager]*

This perspective on risk identification implied acceptance of responsibility for reviewing external risks to achievement of aims, but less willingness to consider operational or administrative risks. The senior academic management role did not include day-to-day operational risk management, but was concerned with higher-level planning and strategic activities.

One DI attendee was curious about the governance aims.

> *For my part I like to know where these concepts come from: and the starting point was the risk register, via HEFCE, and I don't know whether your background could have furnished us with the, how important it is for HEFCE and what, how it emerged, or how it compares in the wider world with risk registers. [T1A2 Academic/Manager interview]*

The comment illustrated a desire to understand regulator aims and private sector practices, as an input to local implementation.

E&F received information from senior management about the desire to be a 'world class' organisation, which group members found hard to reconcile with spending decisions. Consequently, the aims of the organisation were unclear at the local level for this group.

> *I think there is a serious issue there that needs to be addressed, because it almost seems like there is an expectation at one level, and there's a 'don't understand' at the next level, of what it is that we are actually being asked to do. There is very little feedback. [T3A1 Manager]*

Concern about the lack of a link between the senior management of the University and other staff members was expressed.

> *There is a problem with linkage between the senior college management and the operational level. [T3A1 Manager interview]*

Staff members were unsure about whether they understood the Institution's aims, adding a further level of uncertainty to the risk assessment process (Henry & Walker, 1991). Consequently, the

implementation the Strategic Plan was difficult to translate into operational terms in E&F.

> *If you look at the Strategic Plan, then it can mean different things to different people; it is good as a framework, but it does need some flesh putting on it for people to try to get closer to the centre to understand what they are trying to deliver. [T3A1 Manager]*

The risk management training encouraged E&F staff to consider both the long-term and short-term in relation to a range of risks.

> *Let's look at the high-level review, and let's take it right through to the operational coal face, as it were, to basically see how do you keep all these balls in the air, because if you start concentrating on the high-level, you start to miss out on the basic stuff you need to get right; and if you just concentrate on the coalface stuff, you start to diverge from what the expectation is, not that we know what the expectation is. [T3A1 Manager interview]*

The lack of clarity about the organisational goals made it difficult for the group to align short-term planning with long-term aims.

The introduction of the PFI approach to funding public buildings resulted in partnership arrangements with Ecovert to provide services on some University sites. The second workshop within E&F considered them an expensive option.

> *We can't understand why are they charging us £3,000 for cable that we can have installed for £900. [T3A1 Manager]*

In one building, there was a 25-year contract with Ecovert for support that reflected a lack of focus on longer-term potential cost savings.

> *If they spend £half million a year on electricity so what are the consequences? College pays that; there is actually no incentive for them to reduce their energy bill. [T3A1 Manager]*

These contractual arrangements were also evident in relation to catering.

> *Somebody was telling me that they were trying to have a party for some member of staff who was leaving and they weren't allowed to bring in outside contractors. They had to pay Ecovert for the sandwiches and whatever, which was an outrageous sum of money. [T3A5 Manager]*

The costs involved in such long-term contracts were interpreted as a significant risk to the University.

> *And we've got them for another 17 years [...] and, of course, you pay for every single thing. [T3A2 Manager]*

Attendees expressed impotence and a lack of control.

> *But what can we do? [T3A5 Manager]*

> *With Ecovert, they've got the college by the proverbials. [T3A4 Manager]*

The E&F attendees showed a lack of awareness of the type of PFI arrangement that public institutions were being encouraged to participate in, and arrangements with Ecovert were interpreted as an unintended outcome of poor contractual arrangements. Consequently, it was questioned whether new buildings were the best approach for estates development.

> *There must be something wrong with the strategy, then. There is something fundamentally wrong there. [T3A5 Manager]*

Inherent in these E&F discussions was the impression that funding could be found for major new works, but attendees were unaware that since these may have been PFI arrangements, there was no need for the University to provide the initial investment. Communication had not been successful in enabling this strategy to be understood by workshop participants.

The lack of availability of policy guidelines to BHS members of staff was considered a problem.

> *Well, it just makes it more difficult for us to manage that, because we are not getting guidance from the college over what should be policy decisions really. [T4A5 Technical Manager]*

This comment illustrated that lack of clear organisational aims increased the difficulty of implementing local controls. Other comments illustrated a lack of awareness about the Risk Management Policy.

I don't think it will happen unless it gets from you to [name], to whoever it is doing it, and then there becomes a policy document. [T4A3 Technical Manager interview]

Unless somebody actually writes us into the system, into the process … [T4A5 Technical Manager interview]

There was no reason for staff to look for policy or procedures unless they related to their role.

I don't know if I'll actually be involved in it. [T4A4 Technical Manager interview]

The group selected for training in BHS provided empirical illustration of the failure of senior management to cascade communications to those lower in the organisational hierarchy.

These findings illustrated a significant difference between the 3 groups. The DI executive committee were clear about their aims (but these were not necessarily those of the university), E&F illustrated the difficulty of implementing strategic aims and BHS staff, who are less senior, were largely unaware of aims and issued policies, impacting on their ability to undertake operational risk assessment.

6.5.3 Uncertainty Associated with Process Control

The risk assessment model recommends calculating net risk by taking account of existing controls, consequently, their effectiveness has an impact on the severity or frequency of risks occurring. Whilst producing contingency plans reduces uncertainty about the action to take in the event of an incident, one of the DI trainees expressed concern about the effort required locally.

What could we do if a great piece fell off the tower, […] or something horrible, or there was a terrorist attack, or an outbreak of legionnaire's disease in the tower or something? Now, to actually think through that would be a substantial piece of work, and none of us have the time or opportunity, and I don't have somebody sitting around doing that. We just haven't put

that sort of contingency plan in place. [T1A1 Academic/Manager]

All E&F participants who expressed a view on the matter consider contingency planning poor. The importance of contingency planning to reduce uncertainty about what to do in the event of an incident was stressed.

We must have robust mechanisms in place for emergency situations, be they terrorist, animal rights. [T3A4 Manager interview]

I think the college has never addressed this in a joined up fashion. [T2A3 Manager]

There was uncertainty about the action to take should an incident occur.

What would we do if there was a major terrorist attack, a major animal rights attack on this building, how would you actually respond, and to be honest we've never really ever tackled it, we just hope and pray, and it doesn't mean that on a day to day basis the building isn't secure. [T3A2 Manager interview]

Such external threats were considered to be outside the University's control.

That's a tough one to answer. We have external threats in terms of natural disasters, lightening strikes, which you can't really mitigate for. More importantly, I think we've got terrorist action, not necessarily levelled at the college but, as a consequence of. So, if there was a dirty bomb in the West End, for example, it could affect the college. [T3A2 Manager interview]

Several E&F interviewees were aware of the risk posed by such external threats, and were able to interpret them from a local historical perspective.

If there was a major incident at [station name], I mean, that's a terrorist target or, even though it doesn't affect us now, the hospital, it's a huge risk, because of course they would be a number one, they would be a receiving centre, and we would probably all sit here looking out of the window, with people being brought in from a major bomb blast, it happened when they took them all to [hospital] from the terrible one 2 years ago. [T3A2 Manager interview]

This view of risks arising from the external environment, with the group unable to prevent such occurrences, did not stimulate action that would mitigate the threat; it was outside the scope of E&F to influence such events.

The need for contingency planning also related to routine infrastructure failure within the system.

> *Part of the function of the Estates team is to actually state the risk and the likelihood, and talk about things, about how quickly the situation can be recovered. If you have a plan in your back pocket that will say well, it is going to be off for 3 days, and then we can actually get the building heated again. [T3A1 Manager]*

Poor planning resulted in E&F having to respond in a non-programmed way.

> *If we are all just making it up as we go along … [T3A2 Manager interview]*

Lack of planning was mitigated by the experience of local E&F staff, who were able to react to new situations without procedural guidelines.

> *But a lot of it is good will, staff that have been there for a long time, know what needs to be done, and get on and do it, but there is nothing actually written. [T3A4 Manager]*

Risk avoidance increased if procedures were not generally available.

> *A lot of business risk is attached to not having standard ways or approved ways of doing things, so people feel uncertain and won't take risks, 'more than my jobs worth'. [T2A2 Manager]*

Programmed decisions incurred smaller risk (Martin, 2001).

> *It's a confidence thing; it's policies and procedures, again. [T2A2 Manager]*

In an organisational culture where procedures guide actions, E&F individuals would be unwilling to make decisions in their absence, in the hope of blame avoidance.

One BHS attendee cited a recent incident that posed a difficulty due to the lack of pre-planned processes.

> *I think it sits there in the background until a problem becomes a problem. So, for example, just recently we had a scare, or a potential scare with […] letter bombs to forensic science departments. So, as we have a Forensic Science Department, we started to think about that, and when you started to delve under the surface about what was in place to deal with that. There wasn't anything formal in place, and we were devising it on the hoof and probably didn't do it properly. [T4A5 Technical Manager]*

The individual concerned was unsure about how well the problem was managed. In such situations, feedback would increase confidence in relation to future actions. The attendee was also concerned about the lack of evacuation planning.

> *Nor is there anything other than a fire evacuation plan, so there is not an incident evacuation procedure. [T4A5 Technical Manager]*

One BHS trainee questioned whether preventative actions were part of the remedial work undertaken after a flood occurred.

> *If that happened again, would the water still come straight through in the same manner as it has done, or have they put in? […] So, the basement would be flooded. [T4A6 Technical Manager]*

This comment contained the implication that, despite risk management processes, senior management did not implement risk mitigation, even after an incident. The attendee interpreted this as a signal about how seriously the organisation treated risk management activities.

There was awareness in BHS that contingency planning could reduce costs and uncertainty in the event of an incident.

> *If we'd had emergency power, we wouldn't have lost as much. [T4A3 Technical Manager]*

The same incident was described by another attendee, and loss of research material was considered alongside data and financial losses.

> *We didn't lose much data. The flood happened before the building opened. […] Nobody had moved in, they lost samples in research areas. [T4A1 Technical Manager]*

For individuals involved in research projects, the loss of samples may require certain parts of an experiment to be rerun. In some cases, significant time could be wasted.

An interesting description of increasing uncertainty resulting from information overload was described in an E&F workshop.

> *If you don't have that in place, people are then, sort of, in terms of their risk appetite are bulimic and all they do is just pass it up, and then that doesn't help anybody, because at the top, they can't sort the wheat from the chaff, because they have got so much information. So, it goes back down again, and comes back up. [T2A2 Manager]*

This conceptualisation indicated a possible link between responsibility and risk appetite.

The workshops groups all exhibited concern about contingency planning, but despite increased uncertainty locally as a result, they did not accept responsibility for the activity, and cited lack of resources as a reason why someone else should be doing it. Furthermore, lack of confidence in process effectiveness was expressed many participants and this uncertainty increased net risk assessment values.

6.6 Observations from a Dental Institute Executive Meeting

I was invited to attend an Executive Meeting on 29th March 2007, to investigate how risk management forms part of the activity in these forums. The meeting was well run, with a chair and agenda, commencing promptly at 8:30am with 9 attendees. Notes (not detailed minutes) were issued for each meeting. I did not record the discussions, but noted key points during the meeting.

The discussions were wide ranging and covered many of the categories of risk HEFCE (2001) identified. These included students, research, H&S, facilities,

staffing, finance and organisational issues. In addition, the potential merger was covered briefly alongside discussion of expected changes relating to moving or new institutional arrangements and a possible opportunity to expand activities. Furthermore, there was evidence of informal risk assessment (i.e., a need to mitigate was recognised without assessment of probability or severity), resulting in risk reduction actions for one particular issue. Attendance at the meeting confirmed that these routine management discussions represented an important element of the local risk management system, albeit without formal assessment ratings.

6.7 Summary

The narratives from workshops and follow-up interviews provided a more detailed description of the risk assessment process than the first stage interviews because of the particular setting during data gathering. Appendix 6 contains reflections on workshop data validity and Appendix 8 provides an analysis of the data from session feedback forms. The discussions in this chapter provide input to cross-case analysis in the following chapter, which draws on the workshop findings and the interview data in the previous chapter, to address the research questions.

7 Analysis of Empirical Findings

7.1 Introduction

This chapter draws together the empirics illustrated in the previous two chapters with the aim of answering the research questions. The SST analytical framework is evident in the categories developed to draw together multiple perspectives of risk assessment. This structure facilitated comparison to provide an input to the DDE normative analysis presented here. This chapter sequentially analyses the four research questions. As the analysis progressed, the questions being asked, interacting with the data, encouraged further definition and focus. Each of the four analyses explicitly acknowledges the more detailed development of the questions during the study period.

7.2 Analysis One

Research Question 1 asks:
How are operational risk assessments being carried out in the University?

This question was explored through a range of perspectives, and data reveals it to be the most complex of the analyses, in which normative analysis was complemented by evaluation of informal risk management activities and formal documentation was compared with narrative accounts. This section begins with a comparison of the 2005 and 2007 iterations of the risk register and goes on to analyse contemporaneous participant narratives from each phase of the study with relevant risk register outputs, comparing and contrasting them with participants understandings of risk as expressed during the study period utilising the SST theoretical perspective. Insights from this comparison were valuable for the analysis that follows, in which compliance with normative guidance was analysed by overlaying the DDE model (Figures 3.1 and 7.2) on the HEFCE (2005) framework, utilising understandings developed through interaction of data with the SST framework. To complete the analysis of question one, the SST framework was used to examine the 'who' of risk assessment, revealing the development of the 'how' research question to form an additional analytical

category. Furthermore, the presence of an informal risk management system (i.e., normal management practices, not recognised as performing a risk management function) required the investigation of two parallel 'how' questions, investigated under headings used in the previous two chapters. This section concludes with a summary of key findings.

7.2.1 Risk Register Analysis

This section aims to critically evaluate differences in risk interpretation through comparison of written and oral empirical contributions. The first section provides an overview of the differences between the two corporate risk registers that provide the data for this comparison. A review of the templates reveals process changes between 2005 and 2007, with additional headings evident in the most recent register.

The corporate risk review (June 2005) was contemporaneous with the first stage interviews, allowing comparison of data. The formal process resulted in the production of the Corporate Risk Register, to highlight the most serious risks across the organisation. This document represents the output of the second cycle of the risk review process. Figure 7.1 illustrates the template used to record risks in the 2005 register.

N°	Risk	Further Details and Consequences	Likelihood of Risk (scale of 1-5 where 1 = low and 5 = high)	Impact of Risk (scale of 1-5 where 1 = low and 5 = high)	Potential sum at risk (where applicable)	Action Plan and Relative Movement in Risk

Figure 7.1 2005 Risk Register Template

The narratives reveal that an overall qualitative rating is more attainable than a calculated financial value, so the column 'potential sum at risk' is not applicable for many of the identified risks. The action plan column implies the ability to define and implement mitigation, and may have contributed to local understandings that completion of the register only related to activities for which the group had overall authority and responsibility. From the SST perspective, it does not make sense to add a risk for which the group is unable to define an

action plan, thus signalling that information on this topic is not for them, and such threats can be left for others to worry about.

In comparison, Figure 7.2 illustrates the template used to record risks in the 2007 register:

N°	Risk	Risk Owner & Influence	Further Details and Consequences (Including Potential Sum at Risk)	Control Improve-ments	Comments on Net Risk following Control Improve-ments	Likeli-hood	Impact	Net Risk

Figure 7.2 2007 Risk Register Template

These updated headings reveal the addition of categories that reflect the conceptual use of net risk, in addition to including responsibility for risks. Reviewing differences between the assignment of responsibility for managing risks in the two registers provided additional longitudinal data about the formal process.

The 2005 register did not include a column to indicate responsibility, but identified a responsible officer for each risk in the body of the document. Table 7.1 lists the risk categories present, associated responsibility attribution and whether the assigned role was academic or administrative.

Risk Category	Number of Risks Identified	Responsibility	Academic/ Administrative
Staffing	3	College Secretary & Registrar	Administrative
Students	2	College Secretary & Registrar	Administrative
Research	2	Managing Director of 'University Business Ltd'	Administrative
Knowledge Transfer	1	Managing Director of 'University Business Ltd'	Administrative
IT	2	College Secretary & Registrar	Administrative
Capital Financing	2	Director of Resources	Administrative
External Economic Factors	1	Director of Resources	Administrative
Reputation	1	College Secretary & Registrar	Administrative
H&S	2	College Secretary & Registrar	Administrative

Table 7.1 Risk Owners in 2005 Key Corporate Risks Document

The 2005 risk register listed 16 risks in total. The responsibility for managing these risks resided with senior management represented by three administrative members of staff, highlighting a lack of academic engagement with the process. Table 7.2 provides comparable data for the 2007 register.

Risk Category	Number of Risks Identified	Responsibility	Academic/ Administrative
Teaching*[19]	3	Vice-Principal (Students)	Academic
Research*	3	Vice-Principal (Research)	Academic
Value Added*	1	Vice-Principal (Arts & Sciences)	Academic
Identity*	2	Vice-Principal (Arts & Sciences)	Academic
Professional Services & Infrastructure*	4	Head of Administration & College Secretary	Administrative
Staffing	2	Head of Administration & College Secretary	Administrative
Financial	6	Director of Finance	Administrative
Estates	2	Head of Administration & College Secretary	Administrative
Facilities	2	Head of Administration & College Secretary	Administrative
Arts & Sciences	1	Vice-Principal (Arts & Sciences)	Academic
Health Schools /NHS	8	Vice-Principal (Health Schools)	Academic

Table 7.2 Risk Owners in 2007 Key Corporate Risks Document

[19] *These risks are associated with key targets, indicating a link with strategic plans for 5 of the 11 categories.

The register contained 34 identified risks in total. The 2007 data showed that all risk owners remain senior managers. However, the management of School risks had become the responsibility of Vice-Principals for the appropriate area, a major shift in responsibility from Administrative to Academic functions in comparison with the 2005 document. It is important to note that these changes would appear positive from the perspective of the regulator, the compliance paperwork illustrates developments in line with recommended guidance. Notwithstanding, no member of the workshops indicated that liaison with the Vice-Principal included discussion of matters arising from the risk register. In addition, there was no evidence of risk management training for designated risk owners. The addition of key targets and categories such as 'value added' and 'identity' illustrated a more managerial approach to the register in 2007 compared with 2005. A critical evaluation of the link between the risk register and strategy, represented by key targets revealed that while 13 identified threats could be linked to corporate strategy, the remaining 21 could not, suggesting strategic planning did not extend to cover the majority of potential risks and by implication, did not encompass several organisational aims. This was particularly significant in relation to Arts & Science and the Health Schools, interpreted to show lack of engagement by academics in strategic planning activities, alongside a reluctance to be involved in risk management activities. For senior academics, such managerial practices were not interpreted by their psychic systems as 'information', they remain outside the academic role and could safely be ignored and left to administrators.

The remainder of this section will explore the underlying register process in more detail, to contrast risk interpretation in the interviews and workshop discussions with the formal risk management documents. Interviewees, from both phases of the study, were asked to identify the greatest risk to the University, and these responses enabled comparison with the Corporate Risk Register, with reference to the workshop narratives if discussions involved risks that were described as significant or major.

Whilst some overlap was found between the Phase 1 interview responses and 2005 risk register content, the corporate review process was not picking up a

number of major concerns. Academic issues absent from the Corporate Risk Register related to teaching/research balance, Research Assessment Exercise (RAE) failure and staff stress:

> *I guess that it's easy and natural to focus risk around the next RAE, so the risk is that we do not perform substantially better than we did last time. [Medical]*

The absence of such risks from the risk register reconfirmed a lack of academic engagement with the process. In addition, a lack of capital investment and poor maintenance were raised as concerns by several interviewees, yet this centrally managed risk did not appear on the Corporate Risk Register, despite several of these interviewees having had the opportunity to provide input to the document. Issues extending beyond the control of staff members were overlooked in reporting School or Departmental risks, despite their impact at local level. However, cost and time overruns and poor estimation for building projects were on the register as an input from the Finance Department, who took responsibility for control of these risks.

Several existing control systems were perceived to pose serious threats, including the admissions process, poor process implementation more generally, insufficient communication and a lack of planning. Once again, these concerns were absent in the risk register. It is possible that the anonymity of the interviews encouraged individuals to talk about risk concerns, which they would be reluctant to record in a formal document seen by the Principal. Alternatively, it confirmed lack of involvement in the process by senior staff and suggested the template used for administrative responses ignored such risks. All risks listed on the register were mentioned by at least one interviewee during the course of the interviews, illustrating that the risks listed were valid concerns, but the register represented only a sub-set of risks that worried the study participants.

The comparison of Phase 2 interviews and workshop narratives reflects the difference in sampling between the two phases of the study, requiring a more detailed examination of the 2007 local registers that provided input to the key

risk document, for each of the embedded case studies, to reveal some interesting features of the process.

The DI group had not previously prepared or submitted a risk register, and the training was arranged quickly after the initial contact, to provide guidance before undertaking the activity. The local register listed 21 risks, of which 9 appear in the 2007 Corporate Register. The format used recorded likelihood and impact, but not potential sum at risk. This change from the 2005 format suggests recognition of the lack of ability to calculate value for most organisational risks. Qualitative ratings: Low, Medium and High, were given to each. Using these values, I calculated the combined scores (using the HEFCE rating grid, Figure 2.1) and found that all risks with a 'High' outcome, with the exception of one that was being managed locally, were present in the 2007 Corporate Key Risk document. This provided an indication that for this group the process was enabling them to share major concerns with senior management, and could be said to be performing as the governance intended for the Detector element of control. The use of SST motivated understanding of reflexive systems exploits the idea that it is important to change senior management self-image in relation to the risk management activity, to lower barriers to acceptance of responsibility for the role. This part of the study confirmed that SST can produce the kind of change that critical theory aims for, as increased understanding, in the DI in particular, led to a reflective ability to engage with the risk process in a more meaningful way.

The group utilised the local risk register to transfer responsibility to other sub-groups within the organisation for 3 risks related to IT and professional support, providing an instance of the use of the risk register as a tool for expressions of non-liability. However, it could be interpreted as an attempt to ensure gaps in responsibility are clarified, and the use of the Register in this way cannot be viewed simply as a matter of blame avoidance. Despite local impact, some risks were not manageable locally, suggesting the risk register provides a way of ensuring senior management awareness of the need for co-ordination or action.

The follow-up interviews suggested the E&F Department register was completed after the training sessions were held, and participants contributed to the register for the first time. Of the 13 identified risks 2 were quantified, reconfirming the difficulty of providing cost estimates. The local register included 6 issues related to climate change ('green legislation' and energy costs) that were not reflected in the key risks, although these provided the Head of Department with sufficient concern for inclusion in the workshops to provide the local slant for discussions. Four entries were included in the key risks, one quantified at £22m per annum was given a low rating, others assigned 'unknown' were rated 2 mediums and 1 high. The high rating related to estates maintenance, and reflected local descriptions about the most serious threat for the group, indicating successful communication of this concern.

A senior administrator in the School, who did not attend the risk management training, prepared the BHS register, listing 12 risks. A £ value was given for quantification of 4 risks, 3 had qualitative comments, 5 were blank and one indicated 'None'. The latter highlighted the risk associated with loss of 'teaching only' staff for which ratings were qualitative (medium for impact and likelihood), quantified as 'None', implying there was no financial impact. However, another risk on this Register showed a potential loss of £1.7m and noted that failure to achieve target student numbers was partly because of poorer than usual progression rates, a metric linked, in part, to quality of teaching.

Another risk assessed to be Low x Low inexplicably resulted in qualitative assessment of High for the overall quantification. The action plan for risks in relation to the RAE illustrated an element of 'gaming' of the system of external assessments (Bevan & Hood, 2006) in stating 'maximise spend and publications up to census date'. The register failed to reflect the concerns expressed by BHS study participants in the workshops and interviews.

The choice of risk for inclusion in the corporate register might be expected to relate to magnitude of impact, but this was not clearly demonstrated, one risk assessed as £1.7m was not included, whilst one of £300,000 was. There was less evidence of correlation between local assessment outputs and the top-level

risk document for BHS, particularly in relation to the accounts of tension between research and teaching emphasised by participants. It is tempting to compare this register output unfavourably with the other two groups, and to suggest a causal link between a lack of senior management involvement in training and completion of the register and less effective process outcomes, both locally and for the organisation as a whole.

The review of the Key Corporate Risks in 2007 demonstrated that progress was being made towards feeding through concerns from some groups within the organisation. The DI concerns were well represented in the most recent iteration of the corporate document, in comparison with previous issues (to which they made no input) and BHS risks (to which academic staff do not contribute).

An analysis of the 2007 key corporate risks revealed that of 34 identified threats, 12 were present on one or more previous issues of the document (2006, 2005 & 2004). Some risks from previous years had been removed, and new risks added during iterations, indicating that the activity was not a simple review of past records. However, it was difficult to trace the changes between issues; the 2007 document only noted one new risk, despite 21 others not being present on the 2006 issue. The changes indicated that identified risks shift over time.

The risk register process was functioning and there was some evidence of process improvement in relation to completion of registers, although some risks identified in narratives were omitted from contemporary registers. However, it is important to remember that producing risk registers does not in itself reduce the listed threats. The following section utilises these findings to explore normative compliance with the HEFCE (2001) guidance.

7.2.2 Normative Analysis

This section builds on the previous risk register analysis to incorporate narratives from the previous two chapters to further examine the 'how' of risk assessment. This section uses the DDE model (Figure 3.1) to critically evaluate

the model and illustrate compliance with the normative risk management guidance.

The control system described by Hood & Jones (1996) was mapped onto the HEFCE framework (Figure 7.3) to identify ways of gathering information (Detector), ways of setting standards, goals or targets (Director), and ways of changing behaviour and enforcement to meet standards or targets (Effector). The HEFCE framework has been annotated to highlight the DDE elements of the system to demonstrate the normative aspects of the model being evaluated here.

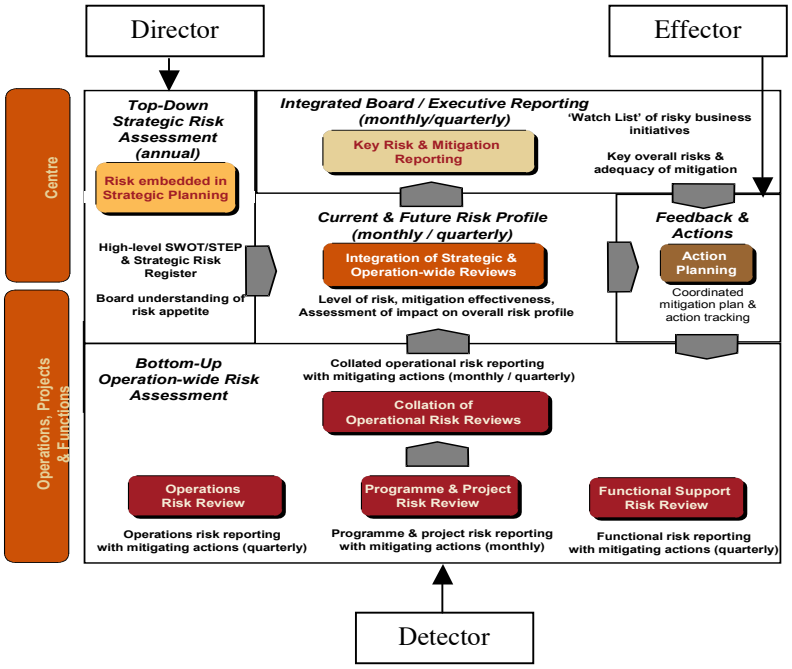


Figure 7.3 Director, Detector, Effector Elements of the HEFCE Framework
(Source: HEFCE, 2005, p6, Figure 1)

The narratives revealed the way in which this framework performed, illustrating enforced self-regulation in action. This section considers two aspects of the normative model; firstly, difficulties the findings revealed in the diagrammatic model and text of the guidance, to provide feedback to the regulator; and secondly, implementation issues to provide feedback to the project sponsor.

Initial critical review of the diagram revealed one difficulty in the representation of the system (Figure 7.3) since it fails to illustrate how the Director elements of a risk management system interface with existing management controls, except strategic planning, despite stating a desire for integration in the text of the guidance.

Furthermore, the diagram calls for integration of a disparate range of risks to provide a collated register. The inability to assign a financial value to the majority of risks was a source of significant weakness in enabling the process to demonstrate selectivity. In this situation, it was unclear how risks could be ranked and prioritised, and a lengthy document or one with potentially significant gaps is the implied result.

The recommended risk assessment grid (Figure 2.1) had been adapted from existing H&S models that had been tried and tested over the years, in that context. However, from a safety viewpoint there is no requirement for a positive scale in the rating grid, since it is unlikely more people will be created, as opposed to killed or injured. If a potential business expansion is graded a high risk, for both impact and probability, it is positive for the organisation. In the Dentistry workshop, it became clear that using the current framework, this would appear to be something that should be mitigated, not encouraged. The rating could be similar to one for a risk that would close a section of the University.

The Director suggests high ratings are something to be reduced to an acceptable level. The DI participants illustrated how this presented a difficulty for users of the assessment framework in relation to opportunity risks. High ratings needed to be reduced, indicating to participants that it would be safest to do nothing. A review of the Key Corporate Risks and Action Plan issued in June 2007 revealed that one new risk related to the failure to establish a new research centre. This is particularly interesting since it represents a possible opportunity, expressed in a negative way, such that failure to grasp the benefits were

considered, not the impact and possibility of obtaining the gains. This reverse perspective enabled the HEFCE framework to be utilised to assess loss of opportunity on the same scale as threats to the organisation. An explanation of how to use a single scale for the assessment of both opportunities and threats, illustrated here, would be a useful addition to the HEFCE risk management guidance.

In summary, the findings confirmed that the University could use the private sector ERM model, despite the weaknesses noted above, since risks link to aims in both contexts. Even in the private sector, the notion of profit as an aim does not produce a straightforward equation, but has to account for changes in the external environment, the tastes of consumers, the behaviour of competitors, stakeholder interests and many other factors that cannot be easily assessed. However, one important difference stood out, the reliance of the University on HEFCE, NHS and other funding bodies as sources of vital resources placed a significant emphasis on external bodies' aims, measures and monitoring methods.

This section will now turn to the DDE analysis to establish the extent of normative compliance with the HEFCE (2001) guidance. Firstly, an examination of the 'Director' element of the model focuses on communication from senior management to those lower in the hierarchy. The Risk Management Policy (June 2006) represented the local interpretation of the external governance (not updated at August 2009). This Director advised that Heads of Schools and Departments were responsible for "cascading down responsibilities for identifying, assessing, managing and reporting risks within their sub-departments, centres, functions and projects". The cascade concept requires transmission of information in the form of communications from the top management to the next level, who, in turn, transmit the information to their subordinates. The interviews and risk training indicated that the first stage of the cascade was compromised, thereby preventing the mechanism from transmitting the information as intended by the Director. That is to say, the PCT has not successfully communicated to

School and Department Heads the scope and meaning of operational risk management as intended by the governance; study participants interpreted the purpose of the risk register through central demands for annual returns. The participants were aware that regulatory compliance, using recommended paperwork trails, reduced risk to the organisation.

The risk management training acted as a Director, and clarified the meaning of risk management in an organisational context, notwithstanding a continued emphasis on normative compliance routines by participants. The intention of the HEFCE Director as a support for decision-making in relation to both risk taking and control in institutions was not evident in narratives about use of the model.

Secondly, the Detector element of the models was explored through examination of the local risk register outputs, designed to identify risks to the organisation. Common features to emerge suggested that risks encountered frequently were ignored; these were not considered reportable risks in the formal risk management system, but were mentioned in narratives. At the opposite end of the range of awareness of risks, those that had never been encountered, such as floods from the Thames, were not considered in the risk management workshops, since they were not remembered within the organisation. Consequently, risk register outputs omitted both frequent and rarely encountered risks.

Furthermore, the framework enabled each area to interpret ‘risk’ in relation to relevant inputs, and resulted in variability in risk register outputs. There was variance between groups about which risks were considered significant, and a number of local issues were raised that would only concern part of the organisation. Participants illustrated the difficulty in assigning frequency and severity in workshops. The integration of Detected responses was problematic in the absence of financial assessment outputs.

The dominant approach of administrative completion of annual returns diminished the potential usefulness of local registers, both in terms of contribution to the corporate register and as a local decision-making aid. Participants described it as a return to senior management that they had in the drawer ready for audit, it was of no further use locally. In terms of ticking boxes, the process was compliant, but failed to provide the decision-making support that HEFCE (2001; 2005) intended, despite process improvements in the development of the risk register template.

Finally, this section moves on to evaluate the Effector element of the model, through analysis of narrative descriptions of internal communications. There was no evidence of Effector elements of feedback in response to the risk register from the Principal's Central Team (PCT) in any of the training workshops or interviews. This indicated a failure in the implementation of the HEFCE framework, there was no Effector to encourage change in response to Detected risks. A review of the Risk Management Policy revealed that the process did not require the PCT to feedback to those providing information to the risk registers. The outputs functioned only to inform the Audit Committee on the status of risks and controls. The implemented framework generated information that travelled upwards in the organisational hierarchy, enabling production of a corporate risk register that satisfied external demands for compliance. The result was a lack of clarity about senior management risk responses as Effectors, and participants expressed diffidence about follow up actions, and who was undertaking them.

In summary, the DDE analysis revealed that the organisation has utilised the model to provide controls aimed at compliance. The risk register demonstrated that risks were managed. There was a lack of integration with existing control processes, some of which, such as student assessment or research peer review, had existed for a long time in all HE establishments. The participants demonstrated a lack of awareness of the Risk Management Policy, and they interpreted the Director element of the model through internal demands for completion of the risk register.

The Detector outputs had little value locally and there was no evidence of Effector activity in response to risk reporting. This application of the HEFCE (2001, 2005) guidance resulted in a system that was compliance focussed and groups interpreted it as such; the risk register was completed as an annual exercise then filed in a drawer. The important point here is that the adoption of a risk register template did function to increase regulatory compliance, and therefore did reduce risk to the organisation, despite lack of utility in other regards.

The following sections investigate the 'how' of risk assessment from the SST perspective in greater depth, as the initial research question is broken down into detailed aspects of the question through the interaction of the data with the analytical framework.

7.2.3 The 'Who' of Risk Assessment

An important aspect of the 'how' question to emerge during the analysis, revealed a lack of clarity about 'who' should be involved in risk assessment, and this additional category aims to contribute to a greater understanding of this issue. In addressing this topic, there were two systems to consider, the formal and informal. The workshop attendance illustrated senior management involvement, addressing formal requests for completion of the risk register from the principal, but the interviews and critical analysis of the corporate registers indicated that administrators were more commonly involved in practice. Consequently, there was little suggestion of academic contribution to the formal process, except after the DI training. By contrast, informal systems illustrated how academics responded to external stimuli, recognised a potential risk, and were able to respond through the introduction new ways of working (e.g., PhD completion deadline adherence), although participants were not able to recognise these as risk management activities, despite their link to organisational aims.

The choice of attendees for risk management training provided an indication of the Heads of Schools and Departments perception of responsibility for the activity. Three of the four Heads of School chose to train themselves and senior academics or managers (with a senior administrator from two academic groups), whilst one academic manager chose not to attend, and nominated administrative staff and less senior academics with technical support roles.

Significantly, the failure to gather senior academics in Humanities for two training dates suggested that potential attendees did not consider the training relevant to their role; consequently, no data was gathered from this group. One of the invited attendees e-mailed me to ask what it was about, and whether he needed to attend, implying he may have been included on the invite by mistake; risk was clearly not part of his role. Insufficient numbers caused the planned Humanities sessions to be cancelled. This outcome also reflected the more traditional academic structure within this School, of loosely federated departments, with a lack of centralised authority, which emerged in the initial interviews. This contrasted with the more managerial approach and existence of an Executive Committee in the DI. The differences in attendance indicated that involvement in risk management activities also varied in relation to local management arrangements.

Although there were differences in participation between cases, staff attending each training session had similar roles and levels of seniority, apart from the inclusion of an administrator in one and a member of staff from another department in another. The inclusion of staff from a different department illustrated ability to identify gaps or overlaps in management controls, highlighting boundary assumptions, indicating a potential benefit to be gained from mixing groups in risk assessment sessions.

The risk register process did not clarify who had access to the document, raising a potential problem. Keeping the circulation to a small circle of

senior staff, made it difficult to engage other people in the process. However, widening the circulation to encompass more staff increased the unwillingness to disclose some significant risks on the risk register. Reporting risk outside the boardroom can portray a weakness, signalling an opportunity for competitors to exploit (CIMA, 2007). The HEFCE guidance does not provide any advice on how to balance this conflict. The written identification of first-order risks presented a second-order risk of disclosure to others, in an organisation preoccupied with its reputation.

The contrast between DI, with senior management staff, who were aware of the register, and BHS, who, with one exception are not, provided evidence of how this problem manifests itself. The first group emphasised the need for confidentiality, whilst the second stressed the need for wider circulation to include staff that participate in the process, requiring a balance to be struck. More importantly, BHS expressed unwillingness to participate if, as was the case, they would not share in the outcomes of the process.

To consider the question of who should be involved in risk assessment, analysis revealed that the activity is less worthwhile for those without authority to act. Consequently, this research favours limiting participation to the higher echelons of the organisation, at least initially.

The ability of senior academics to sidestep responsibility and place risk register completion in administrative hands had important consequences for the formal risk management system, and the validity of concerns represented on the risk register. A lack of clarity in relation to responsibility, authority and accountability for risk management undermined the formal process. However, senior academic involvement with existing practices stepped into the breach, to ensure potential threats were mitigated.

7.2.4 Interpretation of HEFCE Governance

This section provides a brief summary of participant interpretations to complement the DDE normative analysis of the risk management guidance, outlined previously. A significant strength of the SST perspective was its contribution to a critical evaluation of how a range of HEFCE communications were treated. The findings revealed some requests were ignored, or given lower priority (e.g., Pay & Modernisation, teaching peer review). By contrast, other HEFCE signals were treated as 'information' by the system (e.g., RAE, research-led teaching), as reflexive interpretations focussed on financial threats to the system.

Interestingly, compliance with paperwork demands did not require local knowledge of regulatory guidance, the template was available, could be completed (however inadequately) and no further knowledge was needed to satisfy demands. The DI group were most aware of the recommended risk framework and criticised several elements of the HEFCE risk management guidance, suggesting that it encouraged inertia by rewarding risk reduction. By contrast, other study participants revealed little awareness of the detail of risk management guidance from HEFCE, the requirements were interpreted through management requests for a risk register. Consequently, some attendees in DI questioned whether satisfying the demands of the Principal, by producing a risk register, actually benefited the organisation, or merely demonstrated the procedural nature of the risk management.

Interpretation of HEFCE governance placed emphasis on practices that could be measured or assessed, and were linked to funding access, either directly or through the influence of published data.

7.2.5 Competing Aims

Groups within the organisation worked with quite different system interfaces, and the aims and objectives of partner organisations had an influence on local risk assessment outcomes. The Medical Schools displayed the close interdependency of their system and that of an external group, and had to take account of aims unrelated to teaching or research, such as NHS patient care statistics. An additional complexity was present where there was a need for groups to accommodate the aims of partners within their own internal framework of objectives.

The concept of competing and multiple goals within a single organisation (Luhmann, 1995a, Perrow, 1970; Mikes, 2004) was confirmed within the study, opening the way for a 'double bind' (Dunsire, 1978) in which satisfaction of one aim compromised success in achieving others. An analysis of HEFCE aims revealed several interesting examples. The first related to measures used to assess excellence in research, in which theoretical studies competed against applied research, resulting in better RAE outcomes for the former, revealing the presence of sub-goals within University research aims. The findings illustrated that the HEFCE aim of enhancing the contribution of HE to the economy and society was given a lower priority, since HEFCE funding decisions were based on RAE outcomes.

> Since publications only counted for the RAE if they were in refereed journals, publications became more biased towards these and away from professional and more popular journals. This in turn resulted in a reduction of dissemination to potential users of research (Elton, 2000, p277).

In this case, the aims of partner-funded research projects were difficult to reconcile with RAE success.

A conflict arose from emphasis on RAE outcomes in relation to teaching, which competed with research activities for resources, such that mitigating one risk increased the rating of the other. The unintended effect of the RAE was to confirm research dominance:

> But above all, teaching suffered. Research pressures on creative staff reduced their ability to be creative and innovative in their teaching, an effect that first became apparent in the Enterprise in Higher Education Initiative in about 1992. This is not a research finding, but the Higher Education Advisers in the Employment Department all noted the effect (Elton, 2000, p278)

Access to funding in relation to teaching, based on student numbers, not QAA assessment outcomes[20], did not represent a difference to existing ways of working, so no threat was perceived, the aim of high quality teaching could be safely ignored to enable a focus on research excellence (Luhmann, 1995a).

Furthermore, the findings illustrated that the emphasis on research presented a barrier to implementing managerial change in the organisation, since promotion prospects were described as being dependent on research output, not management record, providing an example of how a risk identified as a threat to individual career success could impact on organisational outcomes. Many academics were described as 'under pressure' owing to competing demands for their time and attention. The data indicated that the primary aims of research, then teaching, took priority over other goals. In some areas, significant changes to the teaching portfolio had been made in recent years, reflecting the emphasis on research.

> *We are trying to take seriously the college injunction to make sure that the teaching; the whole portfolio is linked to those areas of research expertise, which is why we've curtailed the rest of the teaching programmes. [Academic]*

This statement illustrated the ability of the University to adapt to satisfy measures and access funds. RAE assessments resulting in poor outcomes, for example, 3* ratings, were cited as leading to the closure of some teaching programmes.

[20] The QAA audit included a peer review of teaching observation and staff development as part of their report on institutional teaching quality, but this is not linked to funding.

> *We are actually getting rid of a whole range of degree programmes, Biological Sciences, Environmental Sciences, ... [Academic]*

The HEFCE research emphasis contributed to these decisions.

> *We had too much a traditional approach for the Research Council funding, molecular stuff, molecular genetics stuff which is all specific to that area, and, to a lesser extent, some of the teaching areas were beginning to be impacted upon by national down turns in numbers of applicants. [Academic]*

The findings illustrated how unintended outcomes arose when interpretation of communications was subject to double contingency (Luhmann, 1995a) and outcomes differed from the intent of the stated aim. The University had closed courses in areas that had received poor RAE assessments, thereby removing them from the research assessment to improve overall RAE outcomes. However, the literature suggests the government intended to improve research quality in these areas, and the closures were regarded as an unwelcome outcome of the stated aim of 'research-led' teaching (King, 2006), resulting from the chosen method of measurement for the aim that took priority, the RAE.

Participants revealed that informal forms of risk management juggle competing aims, as part of 'normal business' (Power, 2004a). However, no evidence of assessment of frequency or severity to drive risk mitigation was found, and it was not risk assessment in the formal sense. Nonetheless, the need to take precautionary measures was identified, e.g., the RMAG internal assessment activity before RAE, to enhance achievement of selected organisational aims.

The omission of competition as a factor in the HEFCE risk framework impacts on the way the regulator sets targets, resulting in a lack of balance, e.g., prioritising peer-reviewed research quality at the expense of other aims. Since risks could not be eliminated, a criteria for balance had to be found, producing outcomes that may be interpreted as unreasonable by regulators. The methods used to assess achievement of

aims influenced organisational perspectives, and when goals competed one aim was given preference over the other using information from the environment to set priorities. This represents a significant finding for regulators, improving understanding of the unintended consequences that arise when perspectives develop through reflexive interpretation of threats to system survival.

While the organisation demonstrated capability to prioritise risks and implement control processes in association with transparency demands, it is surprising and significant that these decisions were divorced from the risk register process.

7.2.6 Implementation is 'Fit for Audit'

The empirical findings, as detailed in the DDE analysis, revealed an emphasis on being 'fit for audit'. Furthermore, asking the 'how' question uncovered 'why' organisation members were undertaking risk assessment. Groups and individuals undertook the risk register process with the aim of reducing the non-compliance risk. Integration of the formal risk management system into day-to-day control activities was not necessary to fulfil this function.

In several narratives, fulfilling regulatory demands was likened to game-playing, necessitating the production of auditable outputs that meet the required criteria. This was especially the case, since the only feedback evident from senior management was to chase registers that had not been submitted. This is not to diminish the risk register's value as a compliance tool.

7.2.7 Communication in the Organisation

The findings revealed many criticisms of internal communication, including lack of awareness of strategy, policies and procedures, and the absence of feedback mechanisms in relation to organisational controls.

Since social systems are constituted as 'action systems' through communication (Luhmann, 1995a), inertia is an expected outcome of lack of communication. Nonetheless, this was not the case for all processes; feedback to senior management was designed into many academic controls, such as 6 monthly reviews of post-graduate progress. It was possible for the University to implement such procedures, despite the difficulties suggested by Dearlove (1998a, 1998b, 2002) in relation to the management of academics, but these did not form part of the formal risk management process.

Compliance with H&S risk assessments using a 'tick box' approach enabled blame avoidance by individuals in the E&F Department. Associated with this, the risk register was perceived as a tool to transfer responsibility up the hierarchy within the organisation. There was awareness of the value of denial of knowledge, those lower down the hierarchy displayed a desire to ensure more senior staff were informed of threats. The findings indicated some unwillingness to acknowledge formal receipt of information about some risks, since communication of ignorance relieves responsibility (Luhmann, 1995a). Lack of acknowledgement enables statements of ignorance to be made at a later date, if necessary.

Risk management training functioned as a form of communication about risk when responsibility for the activity was accepted, but was likely to be ignored when not relevant to group role. Recognition that the activity was already being performed encouraged participants to take a more positive attitude to the introduction of formalised operational risk management by seeing it as part of the role they undertook already, thus requiring less change to group values to incorporate the risk register process. This was a significant strength of utilising SST within the MRT framework, fostering critical reflexive awareness in research participants, facilitating change.

7.2.8 Uncertainty Reduction

Both informal and formal systems confirmed a desire to reduce uncertainty (Bernstein, 1996a; Bradac, 2001). This was achieved by completing formal tick box exercises, and was also demonstrated by groups acting to mitigate risks that could be controlled locally, again, not driven by risk assessment outputs.

In addition, 'expectational ambiguity' (Luhmann, 1995a) reduced uncertainty about the achievement of goals. The management of estates projects incorporated a modular approach (some work being dropped if necessary) to achieve budgeted spend.

The risk assessment process itself functioned to reduce uncertainty, by utilising risk ranking to prioritise those risks that were of greatest significance. One of the most surprising findings of the study was the reluctance of workshop participants to provide values for risk ratings, especially when, for the majority of them, this was coupled with a preference for the use of numbers. In this instance, uncertainty reduction may increase risk, presenting the appearance of control, reducing autopoietic concerns, but not reducing the risk itself.

7.2.9 Summary of Question 1 Analysis

This question investigated how risk assessment was being carried out in the organisation. The review of the risk registers revealed that the system has been implemented and developed, and could be seen as an encouraging sign for the regulator. However, critical analysis revealed that this paperwork fulfilled its role of compliance but was of no additional value to study participants. Significantly, the findings were unequivocal in illustrating the reason why risk assessment is being performed; the risk register outputs are needed to demonstrate compliance with governance.

The normative analysis highlighted significant difficulties in the use of the recommended model, and illustrated how the implementation deviates from the 'best practice' model. The study particularly revealed how poor internal communication compromised the risk assessment process, and illustrated an environment that was severely deficient for formal risk assessment activities. Furthermore, the organisation needed to clarify who should be involved in the formal process, and, more importantly, so did the regulator.

In addressing the question about how risk assessment was undertaken, the most significant contribution from the study was the difference between formal and informal systems. Informal systems did not make any calculative assessment of risks, but they did result in structural changes and practices aimed at enhancing achievement of targets linked to funding. The formal system produced a list of risks, sometimes with associated severity and frequency estimates, but the only change evident in working practices, linked to the risk register, was to a process to ensure the document was ready in the drawer in the event of an audit. Both formal and informal systems displayed autopoietic responses, based on reflexive interpretation of communications from systems that formed their environment.

7.3 Analysis Two

Research Question 2 asks:
Does the organisational setting of the risk assessment affect the way it is conducted?

This section reviews an important aspect of the risk management framework, since integration of local risk registers assumes that integrating these varying perspectives can form a representative picture of the whole. This study utilised an embedded design to explore this question in greater depth. The question developed to examine the character of the three embedded groups; their conflicting perspectives; competition between groups; conditioned expectations

and boundary effects. Consequently, the question revealed aspects of hierarchy, responsibility and authority alongside the aims of the group and exposed conflicts that emerged. Luhmann (1995a) emphasised the reflexive influence of role on identification of 'information' that 'makes a difference'. In describing each group, I recognise that my interpretations were dependent on interactions with them, and that my understandings were drawn from these.

7.3.1 Characterisation of Groups

This section is included to provide the context for SST analysis that follows, since the theory does not explain the historical system states from which autopoiesis proceeds (Luhmann, 2006). It provides an overview of differences of the embedded cases in this study. The contrasting views expressed in initial interviews provided confirmation of the influence of role on risk identification. A more detailed examination of differences between workshop groups, and reflections on my interaction with them, is presented here.

The DI was the first area to receive training, and treated me as a free management consultant, with the added benefit of the potential to feedback their concerns to Internal Audit. In the preliminary interviews, the Head of the DI considered the greatest threat to the Institute is failure to maintain RAE 5* status. However, in the training session, at which he was present, this was no longer the focus of his attention. The effect of time on risk identification was illustrated; the attention of the group had shifted, supporting the view that risk is a socially constructed concept (Hacking, 1999), and can change recursively with information received from the environment. Consequently, other matters, such as a potential merger, provided a greater stimulus for attention than the RAE. This confirms the idea that risk priorities are likely to change over time in response to self-referential views or information from the environment.

Surprisingly, in a group with laboratory facilities and patient care responsibilities, no H&S risks were identified in the workshops or follow-up interviews. Reviewing this finding in the light of my interaction with the group, the managerial approach of the Executive Team was evident, and this influences my interpretation that established management systems confirmed to them that H&S risks were under control.

In general, the DI group appeared very open in their talk about risk. Discussions included an example of an unfavourable external assessment, and the group agreed that they had not identified the risk before the visit. This indicated to me that the group were not defensive about negative outcomes, and were willing to disclose and discuss the problem, illustrating an attempt to learn from past events, enabling the system to adapt and improve survival chances.

The selection of a merger opportunity as a source of risk for discussion reflected local objectives, linked to an aim of the organisation as a whole; the achievement of 'world class' status. I received the impression that the group were ambitious, were well aware that size matters, and were willing to accept risks to achieve long-term aims.

All opportunities have risk. [T1A4 Academic/Manager]

Underlying this approach to risk was an awareness of the need to gain advantage over, or merge with, competitors, reflecting the influence of NPM on this group in the University. An associated shift in concern related to increases in transparency and the formal recording of risks, with the potential for secondary risk to reputation and increased bureaucracy.

Overall, DI had an entrepreneurial approach to risk, in their willingness to countenance short-term losses for long-term gains. They were the only group to demonstrate a clear awareness of risk as the potential for

beneficial outcomes, and view risk avoidance as potentially damaging to the overall success of the organisation.

The E&F training workshops were attended by staff with considerable knowledge about risk management in relation to physical hazards. The participants treated me as a research student, with potential to provide feedback that would enhance the implementation of risk management through study outputs. The Head of E&F nominated his senior management team, and broadened the scope of risk beyond H&S by selecting 'green legislation' as a focus for discussions. The two training sessions covered several issues in common, including estates and facilities, organisational issues, reputation, contingency planning and discussions on the risk management process itself. Not surprisingly, many of the major risks for the E&F Department related to H&S and threats to buildings.

> *Water management, legionella control, lifts, asbestos, electrical safety, falling from heights, flood and fire … [T3A1 Manager]*

The preliminary interview with the Head of Department suggested that the greatest threats facing the organisation were under-funding of maintenance, H&S and business issues. The workshops and follow up interviews confirmed these issues were of concern to other staff in the area. It was notable that the focus on 'green legislation', suggested by the Head of School, was only briefly considered by other group members. Their concerns reflected instead the risks identified in his initial interview, revealing that tailoring of the presentation had not biased responses in this group. 'Green legislation' was only treated as 'information' by the Head of Department, who played a more strategic role in the organisation than other attendees.

Working within tight financial constraints reduced the opportunity to use risk assessment outcomes to target actions, since the budget was effectively allocated as soon as it was available, albeit on those issues

that posed the greatest H&S risk, the organisation's most serious threat in relation to estates.

E&F illustrated a focus on the Department's aims as sources of risk. The issues discussed related to building maintenance, H&S and security, all of which were local staff responsibilities. Lack of contingency planning reflected local impact in terms of dealing with emergencies or shut downs, and was emphasised in both groups.

The group's awareness of the link between authority to act and the willingness to accept responsibility for the management of risks, emphasised that both aspects need to be addressed if accountability is to be successfully delegated within the organisation.

The final workshop was held in BHS, and the participants were unaware of HEFCE risk management guidance, treating me as a representative of senior management, informing them about recently introduced formal management requirements. The preliminary interview with the Head of BHS suggested that a major risk was perceived to be the research/teaching balance, which was strongly echoed during the workshop sessions. A reflexive interpretation revealed this as an outcome of a major recent reorganisation in the School, with a transfer of power to those heading Research Divisions. With the closure of a number of courses, the group reflected their deep-seated mistrust of the changes that challenged traditional values, structures and historical academic and teaching emphasis. The group provided an example of use of communication to attempt to change decisions that were not favourable to the group (Luhmann, 1995a), through expressions that structural changes threaten the quality of teaching and the ethos of the University.

Staff instructed to attend training in BHS were not involved in the risk register process, undertook technical roles, and were less senior than

other group participants. This was evident in statements made about authority to act and lack of involvement in decision-making activities. It was more difficult to get this group talking about risks in the workshops. The attendees were unaware of regulatory changes and the introduction of the risk register. However, once started, all attendees contributed, with the exception of one, who remained reluctant to participate.

Local aims were less clear for this group and discussion focussed largely on the wider aim of high quality teaching and research that provided the focus in the training. The expressed concerns about teaching and research balance echoed several preliminary interviews.

These interactions with the workshop attendees informed my characterisation of the groups. This reflection on the embedded cases enables contextualised interpretations of risk to frame reflexive concerns, discussed in the following sections.

7.3.2 Interpretation of Operational Risk Assessment

This section examines a concept that developed during the analysis; how groups utilise their interpretations of risk to allocate and accept responsibility for the activity. All three groups, and the majority of interviewees, interpreted risk to mean physical hazard (Adams, 1995); the majority of participants expected risk management discussions to be about H&S. As one trainee from E&F explained, attendance at the course enabled a wider range of risks to be assessed:

> *Some people, they would have simply concentrated on H&S as being the risk and it made people think, there is more to this risk than the H&S approach, the financial business type of issues, that helped. [T2A3]*

In the first stage interviews, a number of academics were reluctant to talk about risk; they did not feel sufficiently informed about its management. Four of the nine Heads of School asked for their local senior administrator to be present (only one was successfully persuaded that it

would not be necessary). Administrative staff were perceived as being more likely to be able to answer the questions, confirming risk management fell outside the role of senior academics.

In E&F, risk management was associated with crisis management and the hurried resolution of issues after an event, rather than improved ability to take decisions.

As the definition of risk expanded to embrace organisational aims, members of the DI group displayed some dismay at the range of potential risks, and the 'risk management of everything' was an intimidating prospect. The training acted as 'information' to enable a more focussed approach to the problem.

The study revealed two important aspects of interpretation of risk assessment. Firstly, the interpretation of 'risk' as 'H&S risk' (an administrative role) influenced the authority and responsibility for formal risk management. Secondly, existing control processes that informally assessed risks to the organisation were not recognised as performing that role, until training improved reflexive understanding of the nature of operational risk.

7.3.3 Conflicting Perspectives

This section examines how the organisation established a balance in relation to a wide range of perspectives used to interpret and identify risks.

There were different responses to RMAG activity; some groups, taking a target focus, welcomed the activity to strengthen research performance, while others viewed the process negatively, expressing doubt about its ability to improve the quality of research, reflecting a less results based interpretation.

Other reflexive differences were present. Attendees in the BHS training session were aware of negative aspects associated with managing multiple sites. In contrast, the E&F Department considered that the distributed nature of the estate reduced risk to the organisation overall:

> *[University] has the benefit of not being all on one campus. [T2 unattributed]*

If there were a fire or flood in one part of the University, the other sites would be largely unaffected. The difference of perspective between the two groups illustrated how risk identification linked to the reflexive concerns of the groups. Furthermore, the management of student recruitment presented different problems for those Schools that struggled to attract enough good quality students when compared to those Schools where improved 'A' level grade attainment resulted in over-recruitment.

It is interesting to note that risks to reputation were influenced by reflexive concerns. From the perspective of E&F staff, the potential for run-down buildings, boiler failures or inadequate classrooms to impact on student perceptions highlighted local interests. The BHS group raised concerns in relation to bodies and genetic research, and showed awareness of the way in which external perceptions of dread (Slovic, 1987) in relation to such issues could impact on the organisation. The DI participants were concerned about the impact of server failure on successful delivery of their on-line courses.

There were differences within and between Schools. Position in the hierarchy also influenced the interpretation of risk. For example, course closure decisions: individuals at risk of redundancy would hold a very different view to those in senior management, who identified a need to improve RAE assessment outcomes. What was favourable to some was indeed unfavourable to others.

The analysis revealed that organisational setting influenced reflexive interpretations that varied within and between organisational groups, illustrating the impossibility of reducing all risks to all parties.

The important finding here is that groups may interpret and respond to the same communication in different ways. The narratives provided a window onto psychic systems (Luhmann, 1995a), illustrating how history and experience conditioned responses to information. Consequently, aims need to be set in the context of the groups producing these varying responses to communications, some of which may be welcomed, while others will be misinterpreted, ignored or actively disputed. This is particularly significant as an indicator of potential unintended outcomes.

7.3.4 Competition between Groups

The organisation placed greatest emphasis on mitigation of risks directly associated with the primary aims of research and teaching, and risks linked to support services, such as IT, HEFCE Human Resource Management governance and estates were given lower priority.

Some recent internal reorganisations had resulted in gains and losses in different groups, with some appearing to gain advantage over others. It was, therefore, not surprising that some participants expressed the view that some groups had more authority and power than others. Consequently, some areas saw other groups as sources of risk. The systems exerted little control over each other, experienced little interpenetration through contact or communication, and had different aims and objectives.

In addition, there were tensions between the roles of academic managers and administrative managers.

> If the nature of academic work has in the past implied independence and self-management, the increased emphasis placed on institutional management of teaching in a mass system

> raises questions about the role of the academic community in an area where it had traditionally been unchallenged (Lapworth, 2004, p305).

Academics found themselves in an increasingly managerial environment, with oversight demanded centrally, to satisfy external requests. Resistance was evident; the academic role did not include administrative returns. However, despite this their influence remained strong, the findings illustrate academic aims win the battle for funding. At the same time, the apparent diminution of academic authority in management decision-making was unwelcome.

Competition between universities was also evident in the need to monitor and keep pace with competitors in the HE sector. A fear of falling behind other institutions was expressed, both in terms of transparency measures and of 'missing out' on the claimed benefits of improved risk management.

The findings revealed an increasingly competitive NPM environment, both within and between organisations. The competition between groups within the organisation for access to limited funding illustrated the importance of authority and power in the prioritisation of risk management activities within the organisation.

7.3.5 **Boundary Effects**

This section evaluates how the boundaries to the responsibility and authority for sub-groups and individuals within an organisation impact on risk management activities. Participants described boundaries to responsibility, both in terms of the formal organisation structure and the nature of their work. These boundaries acted as barriers. Responsibility for activities that overlapped beyond reflexive interpretations of role required senior management intervention to enable boundaries to be redefined, or to co-ordinate activities across groups.

In all embedded cases, since contingency planning did not fall within their normal day-to-day role, there was a perception that responsibility must rest at a higher level within the organisational hierarchy. Participants frequently raised the question of who was, or should be, responsible for emergency planning. If contingency plans existed, the staff, particularly in E&F, that would need to implement them were not aware of them, but despite the increased threat to the group concerned should the event occur, responsibility lay elsewhere. One of the most surprising findings for me (with past experience of management system assessment and a 'show me' mentality) was the assumption that others 'must' be dealing with such risks.

Stories about organisational risks described control as a procedure or a set of actions with clearly defined spatial and social boundaries (Soin & Scheytt, 2006). The findings illustrated that internal boundaries resulted in gaps in control systems, highlighted by the assumption that financial estimates associated with estates investment were produced by E&F, since the calculations are not performed in the Finance Department. With both groups represented at the same workshop, it became apparent that neither accepted responsibility for undertaking such analyses; they were not done at all. To mitigate these problems, joint working arrangements for Medical Schools ensured involvement of both groups to prevent a situation in which neither group was taking responsibility for management of particular issues, at the expense of duplication of activity.

The findings provided fresh insight into reflexive interpretations of group and role boundaries, and were particularly significant in relation to unwillingness to accept responsibility for risk management if a threat extends beyond these invisible borders.

7.3.6 Summary of Question 2 Analysis

This section has investigated whether the organisational setting of the risk assessment affected the way it was conducted and confirms that it

did. The findings revealed conflicting perspectives about what constituted a risk and that competition between groups was present in the organisation. Within Schools, the roles of academics and administrative staff were demarcated, with risk falling into the domain of the latter, with significant impact on formal risk assessment outputs. In weighing the risks, balances were struck through the ability to implement risk mitigation, closely tied to authority and access to financial resources, confirming Luhmann's suggestion that hierarchy is used to settle conflicting demands.

All interviews and workshops provided evidence of the influence of local aims and role boundaries on the identification, assessment and management of risk, confirming the organisational setting had a significant impact on the way risks were identified and assessed.

7.4 Analysis Three

Research Question 3 asks:
What is acceptable or tolerable risk to individuals in the University and what factors influence this understanding?

This section investigates this question, using analytical concepts that developed through data interacting with the theoretical frame, to reveal the influence of conditioned expectations, existing management systems, external views, and the impact of degree of control (Adams, 1995) on the acceptability of risks.

7.4.1 Conditioned Expectations

This section examines how conditioned expectations influence the identification of risk, which functions to detect differences between the system and the environment. The findings confirmed the SST idea that the system ignores signals that are frequent and expected. Threats considered 'normal' were not risks to be included in the risk registers. One such example related to the general perception that IT support is

poor and presents local problems to staff. Another concern related to access control and security. However, neither issue appeared on previous risk registers.

Most participants gave the impression that, although IT support was a problem, they were used to working within the existing system. Personal experience as a student suggested that members of staff more recently recruited to the organisation were more critical of the IT infrastructure, network and backup facilities. Systems developed an immune system and omitted on-going, low-level risks from risk registers, although they were recognised as threats in the interviews and workshops.

The DI attendees were aware of the influence of conditioning and suggested that others from outside the group could provide different responses to familiar scenarios, and they saw value in obtaining and utilising such views.

In addition, past events conditioned the way that attendees imagined potential risk scenarios, and past risks that had resulted in problems were more likely to be considered when identifying risks. Furthermore, the findings suggested that historical factors influenced the system's willingness to change, with those Schools and Departments that had undergone restructuring or mergers more open to such ideas.

Individuals and groups concentrated on selected aspects of risk and ignored others (Douglas & Wildavsky, 1982), particularly in accepting continuous low impact risks. Academics worked longer hours to support research contracts that did not provide full overhead recovery, additionally undertaking administrative roles and reducing investment in facilities and infrastructure. Based on my own experience as a student (observer-participant), these arrangements were the normal way of working; only one Phase 1 interviewee saw it as a risk. One workshop attendee raised the interesting suggestion that system conditioning enables lack of funding to excuse organisational inertia, providing the

justification to continue without change. The acceptability of risk was strongly influenced by conditioned expectations.

7.4.2 Existing Management Control Systems

One of the most significant findings about the interpretation of risk related to existing controls, revealing that by default, if a funding request is refused, those affected considered the risk to be acceptable to the organisation. The research illustrated how spending decisions provided feedback for staff at lower levels in the organisation in relation to acceptable risk. The unwillingness to make financial commitment contributed to the view that the organisation had little 'risk appetite'; senior management responses indicated to participants that no change was the preferred approach.

My observation of the DI Executive meeting confirmed the role of existing management forums in the identification and control of risk, albeit without formal assessment of severity and frequency.

While several formal systems were described as ineffective, this was not the case for many existing controls that were not recognised as performing a risk management function. The inability to recognise existing management controls as risk controls undermines an assessment model that compares the net rating of a risk to the ill-defined corporate risk appetite.

7.4.3 Influence of External Views

This section examines how acceptable risk is influenced by external groups that interpret organisational information, and findings confirmed that the outputs of the risk assessment process were designed with stakeholders in mind (Clarke, 1999) in the form of the risk register.

Maintaining the University's reputation was regarded by the majority of the participants as very important to the future development of the organisation. The nature of this risk was complex:

> First, reputation risk potentially pervades *all* organizing activity in such a way that it can be regarded as the purest man-made risk of organizing as such, namely the risk of how one is perceived by others. Second, because reputation is a communicative construct beyond the direct control of the organization, often embedded in media-friendly external measures such as ranking and ratings, then 'reputational risk' poses distinctive management issues, not least being that it defies traditional accounting conventions of materiality (Power et al, 2009, p173).

The risk was manifest in the ability to retain research funding and high quality students, but was perceived to arise from a wide variety of sources.

> *I think it is anything that brings it into disrepute. [T4A3 Technical Manager interview]*

Information about risk was received by the system from external sources, and NPM transparency tools such as published league tables and funding body targets influenced internal views of acceptable risk, since what was measured was what mattered (Otley, 2003). Improvement of measured outcomes and achievement of targets became a focus for risk mitigation activities, evidenced by changes to internal control processes. Significantly, these actions did reduce risk. Even if the focus was at variance with the intended aim of the performance measure, the risk associated with poor external perceptions of internal control were reduced to an acceptable level for the organisation, but without utilising formal risk assessment processes. The transition to an environment of market driven competition increased the influence of transparency measures to determine acceptable risk.

7.4.4 Degree of Control

This section examines an important relationship between ability to mitigate and risk acceptability, and the findings confirmed a link between

responsibility and authority and risk appetite. If a risk could not be controlled by a particular group, the group expressed the view that something should be, or might already have been, done by others. Risks for which they accepted responsibility, and more importantly, had authority, were considered adequately managed, and therefore tolerable.

The DI recognised that degree of control was an important aspect in the conversion of opportunities into benefits for the organisation, indicating that the HEFCE framework focus on control of risks had some benefit, even in the case of opportunities.

For some risk types, such as research fraud and those relating to student activities, there was a stated lack of ability to exercise direct controls, increasing reflexive concerns about such threats. In contrast, some local arrangements (e.g., site sharing arrangements, IT support) had improved the ability to manage risks through increased control.

The degree of control was also reduced when responsibility for managing an adverse outcome was assigned after the event, described as crisis management. This was particularly unwelcome to E&F participants, especially after requests for funding to mitigate the risk had previously been refused. The partnership arrangements under PFI also served to reduce control, and the associated risks were increased from the perspective of E&F and BHS attendees.

In all workshops, participants indicated that a lack of contingency planning increased risk for members of staff who were unsure about how incidents should be handled. This applied both to external threats such as bombs and pandemics, and to the management of internal infrastructure failure, such as boilers or the IT network.

The findings were unequivocal that the design of risk management systems must incorporate authority and responsibility to enable risk management to be successfully delegated. The lack of authority in some

groups reduced ability to take mitigating action; the risk had to be acceptable. Risk assessment activities were less worthwhile for those with a low degree of control. This is a potentially unwelcome finding, since it would require devolving spending authority, and to involve those lower in the hierarchy implies a loosening of financial controls, with associated budget increases, to fund risk mitigation. The involvement of a wide range of voices in the process, recommended by HEFCE (2001) has a serious hurdle to overcome. The findings confirm that a high degree of control is closely associated with acceptable risk.

7.4.5 Summary of Question 3 Analysis

The analysis revealed what was acceptable or tolerable to individuals in the University and uncovered a number of significant factors that influenced this understanding. The conditioned expectations of participants enabled a number of regularly recurring risks to be ignored, while those not encountered previously were unlikely to be considered.

The evaluation of existing management systems revealed a lack of internal feedback mechanisms, reducing local groups' ability to understand the organisational 'risk appetite'. This absence of information suggested a significant finding in relation to the extant literature; lack of internal communication led to the use of financial decision-making to interpret organisational risk priorities and acceptable risk, and also coloured the local understanding of institutional aims. The acceptance of risk by default was the outcome.

External views were most clearly evident in changes linked to performance measures, league tables and assessment outcomes, such that those became the focus of management activities. Most surprisingly, this took place without use of formal risk management processes, suggesting no need to implement such additional controls, since the organisation would manage risks anyway, as it has always done.

The importance of degree of control had two elements, firstly the ability to control increased confidence in risk mitigation, increasing risk acceptability; secondly, a lack of control caused concern despite lack of awareness of how well others were managing risks. In both these cases, the acceptability of risk had little to do with the net risk in some measurable sense, but did have a bearing on willingness to accept responsibility and accountability.

7.5 Analysis Four

Research Question 4 asks:
What uncertainties are apparent during risk assessment activities?

This section critically evaluates an important element that is evident, but not explicitly recognised within operational risk assessment. Facets of uncertainty revealed in the inputs to the process illustrated that risk assessment was not a form of measurement. Consequently, the outputs of the assessment process were themselves uncertain, linked to calculability problems associated with estimating the potential frequency and severity of events in an unknowable future.

7.5.1 Risk Assessment Output is not a Form of Measurement

The recommended risk management framework relies on ability to rate and rank risks, and assumes that outputs represent a realistic assessment of severity and likelihood. If outputs are not a form of measurement, this core assumption of the model is undermined. There was little data use as an input to the risk assessment process and narratives suggested that experience and historical events provided the best guidance for assessment. Risk registers and training sessions demonstrated that available data frequently made it impossible to calculate financial loss in any meaningful way; decisions about risks had to be made with insufficient facts (Adams, 1995).

Discussions uncovered uncertainties associated with the lack of a simple cause/effect relationship of some risks. In many cases, combinations of events resulted in more severe outcomes than if each had occurred at different times, increasing the difficulty of imagining possible outcomes during risk assessment discussions.

A major source of uncertainty in the calculation of risk ratings was the environment in which HE establishments operate. There was a perception of continual change, requiring internal systems to adapt to keep in step with regulatory and other external demands, described as unpredictable. The Health Schools also had to take account of potential changes in Health Services provision and aims, exacerbating this uncertainty.

The difficulty of evaluating changes, such as the impact of new senior personnel in an organisation, highlighted that quantitative assessment was not helpful for such operational concerns, since it was not possible to estimate the future behaviour of another (as yet unknown) individual. However, it was evidently a reasonable cause for concern, utilising historical information.

The complexity of assessment increased when comparing 'apples' with 'pears' in relation to different risks present in the organisation. In the absence of ability to generate financial loss/gain estimates, the comparison of risks identified by different groups in the organisation was difficult. There were vague notions of outcomes that were ‘very expensive’ or ‘cost them dear’, but ignorance of actual values, illustrated the difficulty. Furthermore, some risks, such as reputation or unpredictable changes in regulation, could not be calculated in terms of financial loss and illustrated ‘unknowability’ (Keynes, 1973). Several attendees expressed the view that operational risk ratings were not true risk calculations, but were more akin to value judgements.

In addition, there was confusion about the use of frequency and severity, with descriptions indicating that severity increased if an event occurred more often. The two concepts need to be treated separately to enable the use of the rating grid (Figure 2.1). Training activity helped to clarify this aspect of assessment.

Across the organisation, different levels of assessment were evident. While some risks impact on the whole organisation, others affect particular groups or localities and, at the individual level, personal risks, in terms of job security, promotion opportunities and accountability. The participants confirmed that:

> What is good for one part of an organization is not always good for a larger social system of which it is a part (March, 1991, p104).

Risk assessments can be skewed to maximise local gains, as values and perspectives colour interpretation of the benefits to be gained.

A significant feature of training sessions was unwillingness to assign risk ratings (19 of 20 participants). I interpreted this as a response to the problematic nature of qualitative assessment, with demonstrable lack of relevant data, the need for comparison of different risk types, and the consequent inability to perform a simple mathematical calculation to provide an answer. Paradoxically, the majority of follow-up interviews revealed a preference for the use of numbers to prevent the process becoming ‘a bit vague’. This paradox sheds some light on the emphasis placed on calculative techniques in organisational analysis; the data confirmed a cultural leaning towards such methods, despite awareness of their limitations.

In attempts to assess risk in all workshops, risks that were more serious occurred less frequently, and less serious risks occurred more often. As a result, the overall value tended towards a similar rating regardless of whether the worst case or best-case scenario was considered.

The analysis revealed that, within their groups, people generally agreed with what others had to say and there were no major disagreements. However, since there was little attempt to assign ratings, the discussions did not reveal individual differences in assessment in terms of frequency and severity. One risk tolerant individual from E&F expressed the view that even if a very serious incident did occur, it would be unlikely to close the University, providing an example of how individual preferences for risk taking could influence ratings. Another participant suggested that ratings assigned by individuals would be different on another day, reducing the value of such assessments.

In summary, since risk register outputs were not a form of measurement the process could not summarise the key risks to the organisation with any degree of confidence and did not assist with increasing selectivity and decision-making. There was little evidence of systematic use of statistics or other information sources in workshop risk assessments; historical events, organisational stories and shared experience formed the basis for assessment in the sessions. Participants could not use the recommended framework effectively. In the absence of the ability to produce comparable values to rank different risks and compare them with the organisation's risk appetite undermined the 'best practice' approach to risk management.

7.5.2 Uncertainty Surrounding Aims and Objectives

This section investigates how a lack of clarity about organisational aims presents an impediment to the implementation of risk management, undermining a control system approach that places emphasis on institutional capacity to set definite goals and convert them into quantified decision rules (Hood & Jones, 1996). The organisation had to translate external aims from different funding bodies and partner organisations into a coherent strategy that organisational members could implement. Several participants displayed an inability to reconcile the

stated desire to be ‘world class’ with unwillingness to authorise funding requests that aligned with the strategy.

Misunderstanding of PFI arrangements created further confusion about aims, interpreted through spending decisions. The workshops illustrated that the University failed to communicate the strategic reasons for PFI arrangements; the result was incomprehension leading to the interpretation that poor management practices were increasing long-term costs for the organisation.

The vast majority of interviewees and workshop participants showed little awareness of strategic plans, and although E&F attendees were aware there was a plan, they made the point that it was unclear what it meant locally. While the University was good at writing strategic plans, they were described as poor at implementing them. The use of strategic planning to prioritise competing aims was not evident in this study, although key targets had been added to the key corporate risks document, this was not circulated beyond PCT and Internal Audit staff.

The DI attendees demonstrated a clearer appreciation of aims and goals than other groups, largely since they appeared to have established their own, but whether this reflected the strategic plans for the organisation as a whole remained unclear. Other interviewees and groups illustrated how lack of awareness of aims, and how to satisfy them, undermined the ability to assess risks.

7.5.3 Uncertainty Associated with Process Control

This section investigates how uncertainty about the effectiveness of existing management controls impacts on risk assessment outcomes. Interviewees and group members in all workshops raised concerns about risks encountered as a result of poorly implemented management processes, especially internal communication and contingency planning, but also business planning and plagiarism.

A lack of awareness of policies and procedures (organisational tools for reducing variability and uncertainty), was made evident by several participants, particularly during the BHS workshop session. The E&F and BHS groups illustrated that when uncertainty increased, because of lack of procedures, one outcome was blame avoidance and lack of willingness to take responsibility ('more than my job's worth').

Procedures removed the need for individuals to make decisions, enabling automatic responses and removing doubts about authority to act (Perrow, 1986). Furthermore, while a lack of coherent processes increased uncertainty for the individuals concerned, it also increased ratings for those risks where institutional processes played a part in mitigation, particularly in relation to contingency planning, or the lack thereof. Furthermore, while the lack of procedures for contingency planning was clear, the potential impact of this uncertainty remained shrouded in an unknowable future.

The uncertainty surrounding many existing processes has an additional impact; the effectiveness of controls is an input to the assessment of the net risk calculation, potentially raising risk values across the organisation.

7.5.4 Summary of Question 4 Analysis

The analysis has revealed significant uncertainties that were apparent during risk assessment activities. Operational risk assessment had little quantitative data to support assessment. The influence of different levels of assessment and individual judgements based on experience and the aims of the group resulted in differences in assessment outcomes between sub-groups. The ability to predict future outcomes was hampered by 'unknowability' in the Keynesian sense. The risk assessment process was not calculative, and the numbers or qualitative labels produced did not represent true values. The study illustrated that

risk mitigation activities focussed elsewhere for 'information', and risk register outputs were ignored.

Uncertainty about organisational aims and how to implement them contributed to an inability to rate and rank risks. Lack of confidence in internal processes would increase net risk ratings, if any participants had shown a willingness to estimate them. Paradoxically, the study confirmed that most participants would prefer to stick with the use of numbers, illustrating a desire to reduce uncertainty by providing a semblance of order and forcing decisions that might otherwise be avoided.

7.6 Summary of Empirical Findings

This chapter has analysed the evidence from the previous two chapters to draw out the significant features of the case and to provide answers to the research questions asked. The comparison of narratives and the risk register paperwork illustrated the omission of academic concerns in the registers, except notably, after the DI group attended the Phase 2 workshops. Although there was some process improvement between the two phases, with updated risk register headings and inclusion of academics with responsibility for risk management, the narratives suggested these remained purely administrative improvements. However, these changes would be seen as a positive sign in the event of an audit that focussed on paperwork compliance.

The DDE normative analysis raised a number of issues in relation to the implementation of the guidance, and detailed recommendations on improving compliance with the spirit of the governance are included in Appendix 10 of this thesis (Recommendations for the Project Sponsor). Overall, a number of concerns about the implementation of the risk register process were revealed. Firstly, the document's circulation; secondly, deciding who should be involved in local operational risk assessment; thirdly, the perception that the process is aimed at compliance; fourthly, lack of feedback from the centre, or more senior members in the hierarchy, to those providing input, both in relation to aims and

risk reporting; fifthly, a lack of focus on opportunity risk and finally a lack of integration with existing risk management practices.

The 'how' of risk assessment revealed that the risk register process fed information upwards within the organisation, with little or no information flowing in the other direction. Lack of communication was interpreted as information by the research participants (Luhmann, 1995a) with the outcome that the Effector element of the process was absent. So, no action was required in relation to reported risks. The risk registers were perceived to be of no additional value, and this could be postulated as an important mechanism in encouraging lip service to the process.

Importantly, informal risk assessment was present within existing management controls, illustrating that a lack of formal assessment of frequency and severity did not prevent management intervening successfully to reduce risks, particularly in relation to access to funding, e.g., maximising RAE ratings and improving 4-year PhD completion rates. However, since these activities were not recognised as risk management, the organisation was unable to point to them to satisfy transparency demands.

The influence of organisational setting was confirmed in the study. There was little disagreement amongst participants at each session, confirming similarities between attendees in each group and their risk concerns (Luhmann, 1995a, Krimsky, 1992). The organisational setting influenced risk identification in relation to group influences, hierarchy and individual role. Common features emerged in ideas relating to risk transfer, lack of contingency planning, the ability to ignore certain low-level threats, such as IT or building maintenance. Furthermore, certain risks were described as the responsibility of other areas, and interestingly, it was assumed such risks were being mitigated, despite lack of relevant information. Crucially, this question revealed the presence of competing and conflicting aims, resulting in variation in risks that cause concern, and differing priorities, undermining establishment of an organisation-wide 'risk appetite'. Empirical evidence reveals how mitigation of one risk can increase the threat associated with others, such that a balance needs to be struck.

Risk acceptability is a complex construct that incorporates much more than a comparison of a risk value against a pre-determined level of acceptability. The study illustrated how degree of control interacted with internal management controls and interpretation of external demands to determine the acceptability of risks. An important aspect of external influences on risk identification was the filtering or distortion of aims, associated with the means of satisfying transparency demands. The regulatory and funding bodies need to take account of the way conflicting demands and measurement methods impact on interpretations of acceptable risk.

In the absence of a stated 'risk appetite', it was impossible for organisation members to assess risk in the context of the risk tolerance of the University. The general feedback about risk appetite suggested that a more risk taking, entrepreneurial approach to risk would be welcomed by several who attended the DI and E&F workshops.

The discussions and interviews illustrated numerous sources of uncertainty, both in relation to lack of data, poor internal communication and the assessment of possible future outcomes. The prediction of infrequent events posed a problem, as it is in many quantitative assessments (Kunreuther et al, 1984). In addition, double contingency (Luhmann, 1995a) was present when groups attempted to interpret communication about aims into local objectives. Participants seemed unsure whether senior management communications had been interpreted correctly, feedback to enable completion of the information exchange was absent. In short, the use of risk assessment to support decision-making was not evident, although participants described the system as compliant with regulatory demands. The research makes a significant contribution to understanding the assessment of operational risk, demonstrating that outputs were not a form of measurement, and questioning the usefulness of a calculative model.

One uncertainty that the organisation could significantly reduce is the lack of clarity about responsibility for risk. Several attendees in the E&F workshops were aware of responsibility for risk being passed back and forth in the manner

of pass-the-parcel, particularly after the occurrence of an unwanted event. Authority was an essential factor in the acceptance of accountability for risk. The DI emphasised the impact of authority and funding decisions to allow opportunities to be translated into organisational benefits.

The in-depth analysis illustrated the richness of the data, revealing fascinating insights into a real-life implementation of risk management governance, and drawing conclusions in relation to each of the questions asked. The final chapter of this thesis illustrates how the case study findings make a significant contribution to the literature reviewed earlier in this thesis and evaluates the effectiveness of SST in generating useful perspectives from the narratives. The chapter also discusses limitations to the research and provides suggestions for further work. The thesis concludes by summarising the significant contributions to knowledge that the study makes.

8 Conclusions: Research Contributions and Future Research

8.1 Introduction

This final chapter begins by drawing the research findings and the existing scholarly research together, to illustrate the significant contributions the case study makes to the literature in the fields of risk management, management control and strategy more generally. It moves on to review the value of the SST theoretical perspectives adopted for the analysis and considers limitations of the research. Suggestions for future work follow and the thesis draws to a close with reflections on the study and concluding remarks.

8.2 Contribution to the Literature

This section draws together the analysis from the previous chapter and the literature that provided the background for the development of the research questions. It will focus on the research questions and the contribution made by this thesis to the literature in the fields of risk, control systems more generally and governance implementation.

8.2.1 The 'How' of Risk Assessment

The study reveals how the University adapted to incorporate private sector management practices (Hood, 1995). The process of convergence between regulatory ambitions and organisational interpretations was not guaranteed (Hutter & Power, 2000) and unintended outcomes emerged (Merton, 1936). The study illustrated several examples of the way in which regulatory aims were thwarted through emphasis on targets and measures, with rich descriptions of the way in which the aims of policy were filtered or distorted (Hood et al, 2001).

The organisational oversight and accountability dimensions of risk management are emphasised in ERM, and participants responded to institutional pressures to make risk management practice auditable (Power, 2005; 2007).

> The most recent bright idea in management-speak is the dreaded "Risk Register". Like most ideas, this was sensible until the auditors got hold of it. The basic idea is that you sit down and think of the 10 worst things that might go wrong and work out what you can do to stop them. You look at materiality - will it be devastating or harmless? Then you look at likelihood - will it actually happen? Multiply materiality by likelihood and you get a completely fatuous figure, which you can pretend is a "real measure of risk", and this will make the auditors go away (Knight, 2004).

Several participants were well aware of the risk register's value as a compliance tool, but did not regard the activity as beneficial in terms of local operational performance. The autopoietic system relied on 'tick box' responses to facilitate external oversight, reducing non-compliance risk, despite lack of utility locally (Power, 2005).

Most significantly, a gap in the literature was identified; while existing management controls actively performed mitigation activities, they could not be cited, since they were not 'risk management'.

Decline of organisational trust and low morale (Power, 2005) were suggested in a few narratives but are difficult to link causally to increased use of audit practices. Reflexive comments suggested wider concerns were present since employees could not rely on stability in organisations; there were no longer jobs for life and individuals were faced with knowledge of change (Handy, 1996), including the outsourcing of support functions and teaching roles.

The study reveals decoupling of the risk register with day-to-day activities, some gaps in its content in relation to narrative data and a general lack of recognition of existing risk controls. Audit activities are remote from 'what is really going on' (Power, 1997). Consequently, the DI group questioned the functional benefit of risk assessment, and because the process had little analytical value, it did not provide a basis for effective action (Raban & Turner, 2006).

Since risk is conceptualised as failure to achieve corporate aims the study illustrates that both non-academic and academic staff had already been carrying out risk management without knowing it and workshop follow-up interviews suggested more willingness to be involved if they were made aware of this through training (HEFCE, 2005).

The University had been managing risks successfully for many years, and it seems appropriate to ask whether there is any benefit to aligning internal systems with the suggested risk management framework.

> Clearly, some decisions do not need full explicit quantitative treatment of uncertainties (or any at all): sound risk management decisions are often made and have been made for a long time without any such analysis (Paté-Cornell, 1996, p98).

Compliance with HEFCE risk governance could be more meaningfully demonstrated through an understanding and acknowledgement of the way the University already manages risks.

The University had to balance a number of elements that interacted with each other (Treasury, 2004). The workshops illustrated interactions between risk and other management controls (Mikes, 2009). Assessment ratings should reflect net risk by taking account of such management controls (HEFCE, 2001). The narratives indicated variability in implementation of processes across the organisation and where risk mitigation was concerned, the vast majority of comments indicate internal controls would be considered ineffective, although a few good local H&S systems were mentioned.

The study reveals aspects of three types of controls that Perrow (1986) suggests organisations implement. Direct controls were present in surveillance and scrutiny of statistics, such as RAE outcomes, and rules and regulations, including post-graduate progress monitoring and the requirement for completion of a risk register. Bureaucratic controls were embodied in specialisation and hierarchy, and were found in long standing College Committee structures and the functional split of

administrative and academic roles. Fully unobtrusive controls influenced the cognitive premises underlying action and the narratives from groups and individuals revealed norms that informed appropriate courses of action. This type of control utilises the systems view of itself (Luhmann, 1995a) and not surprisingly, in the HE context, were most evident in the emphasis of participants on academic excellence. Although, perhaps surprisingly, in relation to PhDs, the 4-year completion target had come to take precedence over thesis quality, illustrating the strong influence of financial rewards or sanctions on the alignment of strategic aims.

Furthermore, the findings shed light on Simons' (1994) four 'Levers of Control' to drive business strategy. Firstly, narratives illustrated belief systems in relation to the primary aims of research and teaching, defining basic values, but distortion of these beliefs was evident in a focus on metric production; strategy became equated with achieving compliance aims.

Secondly, boundary systems, or formally sanctioned rules, were evident, but several accounts decried the lack of credible threat of punishment in relation to management controls. An increase in centralised control over reporting for external scrutiny was evident; sanctioned rules were effective in asserting paperwork delivery deadlines.

Thirdly, the rift between formal and informal management of risks was most evident in diagnostics control systems, which monitor organisational outcomes compared to preset standards of performance, a normal practice in existing management controls, but not evident in the formal risk management system.

Lastly, interactive control systems were weakened by poor feedback mechanisms, except when financial penalties were identified. The lack of response from senior management to risk register submissions indicated a failure to support the decision-making of subordinates. The narratives revealed a lack of clarity about strategic aims, and the levers of

control direct strategic goals towards achievement of regulatory compliance and favourable transparency reports. The case illustrates how risk intertwines with strategy, since both relate to enhancing organisational aims and the distorting effect of performance measures was evident.

The participants expressed difficulty in implementing some management controls, including strategic plans, since ineffective communication prevented organisation members being kept informed of policies, procedures and objectives to which they were expected to conform (Drury, 2005). However, this was clearly not the case in all control systems since the University had implemented systems to enhance RAE outcomes in all academic groups. In addition, new processes contributed to success in topping the league of PhD completions within 4 years, with 92% qualified in time against a benchmark of 79% (Times Higher Education Supplement, 5/10/07). Indeed, at the time of writing this conclusion the University was named 'University of the Year' in a newspaper University Guide based on measures of a number of criteria including student satisfaction, research quality, academic peer review, entrance qualifications held by new students, degree results achieved, student/staff ratios, dropout rates and graduate employment levels. In every one of the criteria, the University had improved its position, the only university to do so.

Management of risk was obviously working well in relation to transparency measures, although unconnected with formal risk assessments. In the light of this success, this thesis reveals that implementing formal risk management models is a waste of time, since the University demonstrates that successful risk management, as defined by HEFCE (2001), forms a normal part of academic life. Although the outcomes may seem unreasonable to regulators, increased access to funding and high quality students can be gained through maximising target measures, and thus represents good risk management in terms of enhancing achievement of organisational aims.

Furthermore, as Beach, (1997) suggests probability theory cannot accommodate causal relationships, and the workshops illustrated that decision makers were not doing probability calculations badly, they were doing something else entirely. Probability calculations were not utilised in a process in which people tried to understand causal forces for decision-making. However, several participants indicated a preference for the use of numbers, including those who were reluctant to assign values in the training session, reflecting wider cultural anxieties and the need for numbers (Porter, 1995; Power, 2004a). Numbers were described as familiar and the best way of comparing different issues, despite having no calculative or statistical basis.

One participant expressed concern that when risks scores were assigned the values became significant, despite their questionable basis (NRC, 1981; Power, 2004b). The participants stated a preference for a tool that produced numbers as an output, while supporting the suggestion that the methodological challenges confronting risk assessment reinforce its procedural rather than its substantive utility (Rothstein et al, 2006a). A paradox is evident, risks were incalculable, but participants expressed the view that numbers enabled risks to be more easily compared against each other.

The assessment of NPM outcomes will depend on the aims or values of the assessor (Gruening, 2001); the ESRC will point to statistical improvement in timely PhD completions as an indication of success, while others will be concerned about its impact on PhD quality. In relation to the RAE, some viewed developments positively, while others were concerned about the disincentive to undertake applied research activities, since they are associated with lower RAE ratings.

The thesis confirms that the concept of operational risk captures all of the risks not covered in quantifiable categories (Mikes, 2009), including less measurable and qualitative aspects of risk, related to both internal and

external goals. Consequently, operational risk was an interactive phenomenon (Adams, 1995), with risks emerging and changing over time (Berry et al, 2005) and risk meant different things to different people (HEFCE, 2005; Hutter, 2005; Gregersen, 2003). The conception of risk as a social construct (Renn, 1992; Beck, 1992; Luhmann, 2005) has serious implications for the calculability of operational risk outcomes. The suggestion that risk, as opposed to danger, implies a form of management oriented towards decision-making (Luhmann, 1996) leads to the notion that organisational decisions contribute to the construction of risk (Holzer & Millo, 2004). Governance as a driver of accountability linked risks to decision-making within the University.

While DI embraced an opportunity perspective on risk, taking the view that risk was not something to be avoided (Anderson, 1999), other participants more commonly associated risk with threats and the potential for blame.

Many academics considered risk management to be an administrative role, one they knew nothing about. They were unable to recognise existing practices such as 'double marking', external review of marking and formalised marking schemes as risk management controls, although they functioned to support the aim of high academic standards. Academics' lack of willingness to accept responsibility can be traced to interpretations of risk assessment as a H&S practice. The common interpretation of risk as a way to deal with physical hazards created a significant misunderstanding, leading to interpretations that operational risk management was a H&S concern (Adams, 1995). The empirical evidence reveals that this interpretation of 'risk' results in academic reluctance to get involved, presenting difficulties for the introduction of risk management within HE (Dearlove, 2002).

The detailed empirical data illustrates various ways of seeing risk in organisations, with implications for the taking and appropriation of

responsibility for risk (Hutter, 2005), providing a motive to consider who should be involved in risk management processes.

> The question of whether more effective risk assessment and management is facilitated by narrow or broad participation is hotly contested (Hood & Jones, 1996, p169).

HEFCE (2001) recommend involvement of a broad cross-section of staff. However, the DI group were vociferous about ensuring confidentiality to enable disclosure while the BHS were unwilling to participate if outputs were not available to them. The study indicates the aspect of disclosure risk is not considered in the HEFCE (2005) review; widespread staff involvement is encouraged in their guidance.

> Pooling of observers seems to have advantages in some situations, but in the absence of a clearer formulation of the gains and losses involved, it is hard to specify the precise conditions favouring such a strategy (March et al, 1991, p11).

While wider participation results in a fuller understanding of risks across the organisation, some serious risks could be omitted to reduce secondary risk. Encouraging widespread involvement of staff did provide a complex means to share responsibility among many members, reducing the possibility of blaming a particular individual for errors (McGrew & Wilson, 1982).

The conflict between a desire to involve staff in the process and yet retain confidentiality provides a good example of the 'double bind' (Dunsire, 1978). However, it was difficult for those without authority to participate in risk management activities, making involvement less worthwhile for those individuals. Consequently, a preference for limiting initial implementation to senior staff is a significant finding of this study for practitioners.

The reluctance or limited availability of academic staff to participate led to a split in responsibility and authority in relation to risk management. Many academics would not take responsibility for formal risk management activities and many administrative staff did not have the

authority to implement risk mitigation, consequently neither group accepted accountability. A crucial relationship was evident in relation to accountability and authority; those without the power to implement change abnegated responsibility for risk management (Perry & McWilliam, 2007). Where authority was lacking, capability was reduced, responsibility was undermined, risk mitigation was not possible and procedural conformance was used as a defence against accountability and blame (Sillince & Mueller, 2007).

The study reveals self-regulatory targets were a potential source of risk, with statistics sustaining disciplinary surveillance (Culpitt, 1999). The indirect supervisory role of HEFCE required the University to demonstrate a sound system of internal control. Auditability was internalised by research participants (Power, 1997), to satisfy compliance measures (not to enhance organisational performance, a different aim). Regulatory targets and measures of performance represented the indicators of success or failure.

The private sector governance reforms were designed to penalise inattention just as much as malfeasance (Crouhy et al, 2006), and the risk register enabled the organisation to demonstrate to external reviewers that organisational control was being exerted (Power, 2004a, Rothstein et al, 2006a; Hood et al, 2001). The traditional distinction between legal regulation, voluntary code and organisation-specific rules is not empirically useful, even if it matters for jurisprudence, since risk management governance was effectively experienced by organisational participants 'legalistically' (Power, 2007). Compliance with HEFCE governance was a stated aim for many of the participants in the study, despite the risk management governance being guidance, with no requirement for assessment.

The use of external measures as a focus for risk identification has resulted in implementation that could be considered 'fit for audit, not fit for action' (Power, 1997). An increased focus on performance

evaluation schemes has resulted in the design and operation of systems of control that make it easier to meet the external demands of accountability (Power, 2005; Jacob & Hellström, 2003).

Furthermore, the risk register demonstrates how unintended outcomes emerge when attempting to comply with external targets and measures in which a synecdoche (taking a part to stand for a whole) is used (Bevan & Hood, 2006). To demonstrate that risk management was embedded in University management practices, the reporting tool used was the risk register. In practice, this reporting tool provided little evidence about how risks were being managed within the University.

Bevan & Hood (2006) suggest there are four possible outcomes when the synecdoche is compliant with external monitoring requirements. Firstly, the ideal outcome, the organisation is performing as controllers intended; in this case, the organisation failed to achieve the aim of embedded and integrated risk management. Secondly, the outcome has been achieved, but at the expense of poor performance in relation to other aims; competing and conflicting objectives vied for access to resources, and emphasis was placed on those targets directly linked to financial incentives, to the detriment of others. Thirdly, although performance as measured appears to be fine, the actions being taken are at variance with the goals behind the targets; course closures illustrate how the University hits the RAE target but misses the educational point (Bevan & Hood, 2006). Finally, targets have not been achieved, but data has been manipulated to satisfy external demands; empirics revealed some gaming or manipulation of assessed data, but there was no evidence of falsification of data. The study contributes to knowledge about the design and use of synecdoches, an important factor in the regulatory oversight of the HE sector, particularly in the light of the 'single conversation accountability process', which emphasises statistical returns (HEFCE, 2008).

This study makes an important empirical contribution to developing a deeper understanding of how organisations assess risk, and provided examples that confirm perspectives in the literature, with the following four exceptions.

Firstly, the case study organisation formed a different picture to the one that Dearlove (1998a, 1998b) drew of universities, shifting from a situation of professional authority held by academics in disciplines down in the departments, towards the dominance of central authority in relation to some risks. New control systems had been successfully implemented throughout the University in relation to RAE and PhD completion, involving academic management. Central control could be exerted when understood to increase local access to financial rewards or avoid sanctions. It was evidently possible to involve academics in risk management, provided it was not called 'risk management'.

Secondly, an important contribution is made to the governance literature by illustrating that while self-regulation enables organisations to decide on internal processes to achieve external targets and aims (Culpitt, 1999; Ayres & Braithwaite, 1992), the data illustrated that standardised responses were utilised, based on observing external signals, both from other HE Institutions and the guidance from HEFCE.

> Hence, the circulation of generic risk management standards and principles creates isomorphic pressures on organizations to conform to these models and to apply them: a 'good' organization is one which manages risk in accordance with established frameworks. (Power et al, 2009, p169).

Pre-defined approaches were easier for the organisation to deal with. Research participants saw standard approaches as a way of reducing the risk of non-compliance in the event of an audit. If the elements of the HEFCE model had been mandated the effect would be little different; standardised approaches were the preferred option anyway, reducing uncertainty about auditability and transparency demands. The risk management guidance provided by HEFCE (2001) did not require the

use of a risk register, yet 'good practice' was demonstrated by use of the document across the sector (HEFCE, 2005).

Thirdly, although Hood at al (1992) suggest risk management has come to be merged with management more generally, this is not supported by the findings. An important contribution is made by revealing the presence of two distinct systems; the formal compliance focussed risk management implementation and an active management control system that successfully improved organisational assessment outcomes. Most significantly, the lack of interaction between the two systems reflected organisational participants understanding of risk, which, perhaps surprisingly, revealed an inability to recognise risk management, even as they engaged in the activity. This contribution to knowledge reveals how risk interpretation seriously undermines the implementation of 'risk management' best practice as an integrated control system.

Fourthly, and perhaps most importantly, the findings provide a body of evidence that contradicts the conclusions from a review of risk management implementation that found that HE institutions were moving from achieving technical compliance with governance, to constructively address new patterns of risk (HEFCE, 2005). Risk registers were certainly available. However, the University did not find the recommended framework a valuable decision-making aid.

Whilst it can be difficult to generalise from the single case to the wider social system, the body of data suggests that once risk compliance paperwork has been produced it is put away until the same time next year, and similar lack of utility can be expected in other universities and organisations. Most significantly, this does not mean that organisations are failing to manage their risks.

8.2.2 Organisational setting

Risks were considered from differing perspectives, including threats to the individual, group or the organisation as a whole. Participants had differing views on what was best for the organisation (Bazerman, 1994) and these views were influenced by local aims and past events:

> The structure of internal competition and conflict divides many organizations into advocates and opponents for organisational policies and actions. The contending groups interpret history differently and draw different lessons from it (March et al, 1991, p3).

There were winners and losers in the achievement of organisational aims, and what reduced risk for some, increased risk to others (Mayer-Foulkes, 2002). Power and financial authority to act became important where the resolution of conflicts was necessary in the management of risks (Luhmann, 1995a). However, the validity of different perspectives was difficult to assess.

> Risk concerns may provide a rationale for actions taken on other grounds … hidden agendas need to be brought to the surface of the discussion (Sheahen, 1987, p1049).

The E&F Department emphasis on funding for maintenance as a major source of risk reflected their desire for increased spending in this area to support local aims (Mikes, 2009), but it was difficult to evaluate the magnitude of this risk. In view of the dominance of academic aims within the organisation illustrated in narratives, the E&F Department budget remained unlikely to significantly increase, despite the use of a risk register to communicate concerns to the PCT.

The case study illustrates how risk assessment had little alternative but to include qualitative factors, and that consistency of the numerical values was of less interest than variability in the selection of the types of risks for assessment (Hutter, 2005). The study narratives strongly supported the contention that organisations create sub-goals (Berry et al, 2005), linked to individual, group or role function, partner interests or regulatory

concerns (Hutter, 2001). The presence of multiple, competing and conflicting objectives (Perrow, 1970; Mikes, 2004) emphasised authority to act in the resolution of risk management priorities. Risk discussions revealed that in addition to the formal structure of the organisation, participants perceived that some groups were more powerful than others, with informal power structures that developed. These views were sustained by funding decisions, reflecting power in the hierarchy (Luhmann, 1995a).

Competition was present in the organisation, both with other HE establishments, and between sub-groups and roles within the University (Gates, 2006). Barriers to the implementation of governance included the need to balance conflicting objectives and aims of funding and regulatory bodies; some goals were given priority to the detriment of others.

> Research-oriented academics are still free to undertake research, but the RAE 'has led to a much more interventionist approach from the "management" of universities in respect to academic departments' (Shattock, 1999, p279), and the quest for research funds has tempted academics to shift their research so that it meshes with the missions of research councils (Dearlove, 2002, p364).

The RAE proved a particularly revealing example of the complexity of competing aims (Perrow, 1970; Mikes, 2004). It was difficult establish a balance between the RAE measures and applied research studies, despite customer satisfaction with the latter, militating against the stated HEFCE aim of 'enhancing the contribution of HE to the economy and society'. The research funding mechanism encouraged the University to align research with high ranking studies, based on previous assessment outcomes, to increase access to centralised funding. The organisation was more effective in satisfying assessment measures, but may be less effective in disseminating useful information beyond the boundaries of the academic world (Elton, 2000). In addition, the RAE threatens the cherished notion of academic freedom to undertake research based on its value for knowledge production, rather than its journal ranking. At the

same time, the academic focus of the University made it difficult for those in support departments to gain access to resources for IT and infrastructure investment, despite their underlying impact on academic aims.

Internal boundaries were described as barriers for groups dependent on other sub-groups for support. Additionally, informal boundaries were established in relation to the activity or role of the sub-group (Soin & Scheytt, 2006). For the organisation as a whole, this resulted in gaps in control systems with some risks being ignored by all, since they were seen to extend beyond the job description, or operational umbrella of the group (Power, 2004a).

Joint working arrangements were in place to prevent gaps developing between the University and the NHS. The influence of outside groups was strengthened when particular external boundary interfaces were established, to facilitate interpenetration, as in the case of the DI and the NHS. The environment focused individual's and group's attention on partner concerns, making that information more salient to the system (Pfeffer & Salancik, 1978).

The qualitative nature of operational risk assessment reflected sub-group judgements (Krimsky, 1992), reflexive values and environmental influences (Luhmann, 1995a; Gregersen, 2003). Schemas that emerged in sub-groups were more specific and more generally shared than those emerging across the organisation's entire membership (Harris, 1994), reflecting sub-goals, although some common themes were also evident in relation to research dominance, poor communication and lack of contingency planning. Most significantly, the study supports Gates (2006) finding that the greatest impediment to ERM implementation is 'competing priorities' and thus makes an important contribution to this little researched area.

The findings reveal the significance of the common interpretation of risk as H&S in acceptance of responsibility. Since roles tell organisation members how to reason about the problems and decisions that face them (Simon, 1991): if H&S risk management did not form part of the systems' role, then information on operational risk management was ignored, explaining academic reluctance to accept any involvement in what was seen as an 'out of role' function.

A significant empirical contribution is made to the field of organisational analysis, revealing the complexity of influences on risk assessment within and between groups and providing supporting evidence for the literature cited. The study significantly enhances the understanding of difficulties associated with balancing competing aims, confirming that what is most important to some is of little interest to others. Most significantly, the influence of role and interpretation of 'risk' uncovered the reason for lack of academic involvement in formal risk management, providing fresh insights into a previously little understood aspect of responsibility attribution. The interpretation of risk as H&S interacts with role boundaries to prevent academics paying any attention to risk management communications. Whilst they were actively involved in the development of existing management controls that reduced risk, they were unable to interpret this as 'risk management'.

8.2.3 Acceptable risk

The study contributes to a detailed understanding of how acceptable risk cannot be assigned a value that would be accepted by all participants, since there are competing and conflicting aims within the organisation (Berry et al, 2005; Mikes, 2004; Perrow, 1970; Dunsire, 1978).

The use of SST enabled analysis to reveal the influence of conditioned expectations on the acceptability of risk, with long-standing, low-level risks being continually ignored to enable a focus on signals that reveal a 'difference' to the system (Luhmann, 1995a).

A critical analysis of the influence of existing management systems on the determination of acceptable risk revealed a surprising outcome, uncovering a gap in the literature. Internal views of risk acceptability were interpreted from the outcome of financial decision-making within the organisation, treated as communication about risk, in the absence of other feedback. Refusal of funding indicated that the risk was acceptable.

The study confirmed the difficulty of evaluating dynamic control systems (Otley, 2003), with variable implementation of management controls across the organisation, their effectiveness was difficult to measure and there was little evidence of defined scales or targets to provide an input to net risk assessment. It was difficult to define a single risk scale that enabled acceptable risk to be assessed, even if it did not need to be exact (HEFCE, 2001).

The key elements of the Turnbull Report (ICAEW, 1999) that influence the design of risk management systems illustrated how aspects of performance that are more difficult to quantify and measure get relatively less emphasis (Otley, 2003). Firstly, the narratives confirmed that the University could provide compliance evidence for disclosure requirements, and these were easily audited. Secondly, the assessment aspects of internal controls were subject to the calculative difficulties associated with operational risk, but signs of compliance were produced. Finally, however, for the less measurable aspects related to internal control system requirements, such as how embedded risk management practices were, there was no measure of compliance, and they were overlooked (except in the funding of this PhD study).

The case reveals how the adoption of private sector practices has increased transparency through external reporting and monitoring (Hood, 2007; Roberts, 2009) and influenced reflexive understandings of acceptable risk. The implementation of NPM and enforced self-

regulation guided interpretation of acceptable risk and drove compliance with transparency requests.

> In this way, league tables, rankings and indices which may start life as meaningless and unimportant to internal management measures of performance have the potential to shift motivations and missions by constructing self-reinforcing circuits of performance, particularly where small changes in relevant variables can have large effects on rank position (Power et al, 2009, p176).

The shift towards accountability in terms of results (Hood, 1995) linked risk and responsibility in relation to achievement of objectives. Consequently, when measures were in place to monitor achievement of aims, compliance became the priority, especially when linked to funding decisions or publicised league tables, resulting in particular emphasis or 'narrowing' (Propper &Wilson, 2003).

Changes made in relation to RAE readiness and 4-year PhD submission illustrated how reducing risk to acceptable levels could equate to 'gaming' to ensure process measures were maximised (Bevan & Hood, 2006); there was awareness of the potential negative aspects of this approach, and some participants were happier with this than others.

The ways in which the University complies with external monitoring could be described as good management or gaming, depending on the perspective taken, since measures are manipulated to achieve its own ends (Otley, 2003). The internal RMAG process is designed to maximise contribution of the desired type of high quality research, selected with an eye to the RAE assessor values, illustrating how the RAE process has become enmeshed in the audit culture (Tapper & Salter, 2004). The emphasis on measures challenged traditional university values and generated strategic behaviour and gaming of variables (Bevan & Hood, 2006).

The introduction of NPM private sector approaches has fostered an approach in which the University's students have become customers who

utilise statistics and league tables as measures in exercising market choices, making these important as a focus for risk. The University operated in a competitive pseudo-market environment to attract high achieving students, aiming to maintain or increase funding and esteem, illustrating how customers contribute to enforcing self-control and self-policing (Gabriel, 2005).

While Broadbent & Laughlin (1997) consider that NPM is driven in general by the desire to generate 'good management', this raises the question of what constitutes good management. Self-regulatory control had resulted in change within the University; the risk register process had been introduced, but there was no suggestion that the organisation was more effective as a result. All participants indicated that the documents served no local function, but significantly it did reduce one particular type of compliance risk, and consequently could be interpreted as 'good management', when viewed from the perspective of risk reduction.

This thesis makes a significant empirical contribution to the debates about transparency as a method of control, which has stimulated many criticisms that are illustrated in narratives, including de-contextualisation, blame avoidance and the transformation of organisational purpose into management of performance indicators (Roberts, 2009; Strathern, 2000; Hood, 2007; Power, 1997, 2007). In addition, 'blame prevention engineering' (Hood et al, 2001) is evident, as individuals follow prescribed processes to limit the risk of being held accountable for non-compliance, which is seen as an unacceptable risk. In this case, the risk register helped the organisation to reassure external monitors about the achievement of acceptable risk levels (Clarke, 1999).

While it is difficult to establish causal links in social systems in which many changes occur concurrently, the study does provide illustrations that open up understanding of how governance outcomes can appear both reasonable and unreasonable depending on viewpoint and associated reflexive concerns, since what is acceptable depends on your perspective.

A lack of control served to reduce tolerance to risk (Adams, 1995) and encouraged organisation members to attempt to pass responsibility to those with authority. Where authority was adequate some sub-groups reduced risk by increasing local control, e.g., additional IT support. All groups expressed the view that others should be doing something about controlling risks that fell outside the boundary of the group. There was less concern expressed about risks that could be controlled locally, and in many cases participants expressed the view that these were adequate.

A decision to act on a risk problem depended less on the magnitude of the risk than on the organisational possibility of acting (Otway, 1992). A risk that was easily addressed was selected for action in preference to one that was more difficult to manage, and lack of authority undermined ability to take mitigating actions.

The study confirms the HEFCE (2005) suggestion that the concept 'risk appetite' is under-developed in Universities. The risk appetite of the organisation was not clearly defined in risk documents. However, the participants' view of the institution's low tolerance to risk taking is common to all who expressed an opinion.

The HEFCE guidance skims over the integration of risk silos, but even if this could be achieved, since risk appetite was poorly defined, there was little to align values against in terms of acceptability. The risk assessment process was severely flawed in this regard. Varying perspectives prevent the calculation of a 'risk appetite' that is appropriate to all organisation members, against which risk acceptability can be judged. The study contributes to the debate about the implementation of ERM and raises the question about how usable the model is in a real-life organisation, where such circumstances are the norm, whether in the private or public sector.

8.2.4 Uncertainty

All participants illustrated a lack of clarity due to lack of knowledge (Grandori, 1984). The E&F participants described how uncertainty existed about the aims of an activity and the expected outcomes, and the Dental Institute participants and interviews displayed concern about the means or how an aim was to be achieved (Henry & Walker, 1991). In addition, uncertainty existed at sub-group level about PCT preference selection when decisions related to conflict among divergent interests. The study illustrates how unreliable assessment outputs could be used to support preferred aims (Grandori, 1984).

Concerns about the RAE assessment process, that the criteria for assessment are not clear or consistent are acknowledged by HEFCE (1999) are confirmed by participants.

Lack of communication increased uncertainty (Luhmann, 1995a). For example, many participants displayed a lack of understanding of the PFI contractual arrangements that provide initial funding for estates projects and interpreted subsequent high running costs as evidence of poor management within the organisation.

The discussions illustrated the difficulty of comparing apples with pears when risk was placed in silos with ill-defined assessment criteria (Mikes, 2009). Assessing risk in silos assumes that aspects of problems can be treated in isolation without endangering the overall solution (Meier & Hill, 2005), and the study develops deeper understanding of the difficulties of reintegration of risks in the absence of financial estimates.

The qualitative outcomes of assessment were difficult to compare, explaining the preference for quantitative models where possible, despite their known limitations (Krimsky & Golding, 1992). For risk assessment to be a form of measurement, rather than ‘guestimates’ or judgements, risk scores need to be replicable (Power, 2004b), but the study suggests

that ratings could be different for the same assessor at another time. The narratives illustrated that the future decisions of others were not easy to assess, especially since they were made in the flow of interacting networks (Gregersen, 2003). Furthermore, risk assessment topics systematically varied in relation to local responsibilities and ever-changing and competing aims. The process was also hampered by a lack of clarity about organisational aims and how to translate them into local goals.

Participants suggested that discussions in workshops provided a greater mutual understanding of the relevant issues in relation to particular risks and potential causes, and was beneficial to them, not for risk estimates generated, but for the qualitative narrative content (Otway, 1992). The risk register process did not capture such discussions, unlike the minutes of meetings or committees in which many (risk) management decisions were made. During the follow-up interviews, several participants observed that they found discussions with colleagues useful, but this may be more to do with confirming reflexive views than assisting in the assessment of risk (Luhmann, 1995a).

The training activity functioned to reduce uncertainty (Bernstein, 1996a; Bradac, 2001) by enabling individual views to be checked for consistency with other group members' descriptions of risk, and in this case embedded group accounts agreed within workshop sessions, but could not be assumed to be the only valid interpretation. Goffman (1974, p37) notes how storytelling overestimates the 'causal fabric of experience' as organisational members establish orderly sequences of causes and effects as a means of organising and rationalising remembered experience (Gabriel, 2000). Causal links revealed during discussions could have been illusory.

> Incorrect predictions are not noticed or are interpreted as irrelevant anomalies or measurement errors. Missing data are experienced as consistent with the model and are remembered as real. Information is gathered and distributed more to interpret decisions than to inform them. Meetings are organised more to

> share stories and explanations than to take action. Organizations develop robust understandings that are resilient to contradictory information (March et al, 1991, p6).

The value of risk assessment discussions in prioritisation of risk concerns remained difficult to assess, especially since, in this case, there was no evidence of action stimulated by risk register entries.

Operational risk assessment workshops were not exercises in probability calculation and therefore the activity did not align conceptually with the origins of risk analysis. The discussions centred on unknowable futures (Froud, 2003; Keynes, 1973) and could be characterised more appropriately as uncertainty assessment (Power, 2009). Uncertainty was evident in statements about changes in personnel, lack of information and the difficulty of imagining future scenarios and possible outcomes. The presence of ineradicable uncertainties in discussions provided evidence of poor alignment of the recommended model with unknowability since the governance assumes risk is calculable (Froud, 2003). Consequently, the risk management process was actually concerned with controlling uncertainty.

> Uncertainty is therefore transformed into risk when it becomes an object of management, regardless of the extent of information about probability (Power, 2007, p6).

A significant empirical contribution is made through revealing how one University planned for, represented, managed and was accountable for a range of risks that lacked historical frequency data to guide probability judgements (Power et al, 2009).

The DI workshops supported the findings of a study of risk management in a banking context (Mikes, 2009), and emphasised the unpredictability of the behaviour of others and the difficulty of measuring it. This study makes an important contribution to improved understanding of the qualitative aspects of risk assessments, relevant in both the private and public sector (Crouhy et al, 2006).

The ontology of risk revealed in narratives indicated a fundamental problem with the implementation of a model that relies on the tacit assumption that risks can be treated as concrete physical entities that can be precisely defined and unambiguously measured in objective terms (Hood & Jones, 1996). This research confirms that socially constructed risks are not amenable to calculative models, undermining the application of a technical approach to operational risk management (Froud, 2003; Adams, 1995). Refining scientific tools is unlikely to address the problem (Funtowicz & Ravetz, 1992).

The narratives strongly supported the view that data for operational risk assessment is both thin and conceptually problematic (Power, 2003), contributing to the surprising finding that all participants (with one exception who gave one reluctant value) were unwilling to assign ratings in all the workshop sessions. Since the case study risk assessments could not be considered a measurement their value was limited.

> No change in how the individual attributes are rated qualitatively can guarantee that a qualitative risk rating system will give accurate or useful results (Cox et al, 2005, p656).

The study supports the idea that it may be better to reflect the imprecise, but useful knowledge about potential risks present in narratives than precise number outputs (Cox et al, 2005), but adds a significant corollary; management meetings already do this, a special 'risk management' forum is redundant.

The impact of the effectiveness of internal controls presents an additional measurement challenge, in requiring organisations to assess dynamic and interrelated processes (Otley, 2003) to reach net risk assessment values. However, the unwillingness to assign numbers during risk assessment meant that discussion about risks, their causes and possible future outcomes, formed the focus of the workshops.

The findings make an important contribution to understanding difficulties encountered because of the presence of uncertainty in the assessment of operational risks, with concomitant effects on the risk management process as a whole. In particular, the empirics provide a valuable extension to the work of Power (2003, 2004a, 2009) in explaining and illustrating the detail of risk management practices in one organisation.

Most significantly, the study reveals a shift in the ontology of risk towards achievement of socially constructed aims and targets that does not align with statistical calculations that form the basis for traditional risk assessment (Taleb, 2007). Risk assessment outputs did not represent a form of probability measurement. This study provides detailed insight into the misalignment of the recommended risk assessment model and the nature of risk in organisations (Froud, 2003). This misalignment has serious implications. Conceptually, the notion of risk has changed, but the interpretation of the benefits to be gained from formal assessment has not, and remains rooted in predictive modelling, providing false confidence in the ability to control unfolding events. Consequently, it is not surprising that the expected gains have not materialised in either the public or private sector[21].

8.2.5 Summary of Significant Contributions

This section has illustrated how a more detailed understanding of how an organisation undertakes risk assessment provides new empirical depth to critiques of risk management models and approaches to governance. The influence of group and role in the presence of conflicting and competing aims, contributes to knowledge about how organisations prioritise risks, and yet are unable to satisfy all goals, enabling analysis to reveal how these conflicts are resolved. The investigation of acceptable

[21] For example: Long-Term Capital Management (1998); Northern Rock (2007); Baby P (2007); Icelandic Banks (2008); Lehmann Brothers (2008); the sub-prime banking crisis (2009); CAA (2010); BP (2010).

risk provides vital new evidence that this is a much more complex process than measuring a risk rating against the organisational risk appetite, with the influence of funding decisions determining risk acceptability in the absence of other information. Furthermore, insufficient control increases the unacceptability of risks, while responsibility for risk management is tightly linked to capability and the authority to mitigate risks. The detailed examination of the ontology of risks in organisations and the nature of uncertainty in participant descriptions contributes to debates about widespread adoption of ERM models, questioning the value of formal risk assessment in this context. Since operational risk lacks appropriate data for calculative approaches, there is a significant reduction of benefits to be gained from such formal risk management practices. However, it is important to note that the implementation of formal systems does not hamper existing management controls that continue to act to reduce risks to the organisation.

This section has framed the study findings with relevant literature to highlight the significant contributions the study makes to understanding risk in an organisational context, establishing links to studies in the fields of governance, management control systems, 'strategy as practice' (Johnson et al, 2007), risk assessment and risk management. It highlights gaps in the existing literature in relation to the inability of organisational participants to recognise existing risk management activities and the use of financial decisions as communicative events in relation to risk acceptability. The next section reflects on the analytical value of the chosen theories within an MRT approach to case study research.

8.3 Review of the Analytical Value of the Research Approach

This section explores the value of the theoretical framework and MRT approach developed during the study. It reviews how the analytical constructs interplayed with empirical illustrations of reflexive influences on risk understandings to operationalise and contextualise key elements of the theory. The skeletal framework was complete in its social reach and none of the rich narrative data

was difficult to include within the analysis, with some analytical categories being easy to define, and others that interacted with the data and research questions to develop the theoretical frame. Luhmann's SST provided a theoretical perspective to understand and contextualise conflicting responses to the same communicative event, utilising the notion of difference between referring to self and to something other enabling complex systems to be analysed.

> Luhmann's autopoiesis makes it possible to approach the study of organizations consisting of multiple organizing logics (Hernes & Bakken, 2003).

Reflexive concerns and environmental stimuli were reflected in the way in which risks were identified and assessed, and this skeletal concept was particularly valuable in relation to the constructivist approach adopted, as conflicting views were expected and sought.

In addition, systems are conditioned through past interactions, and an immune system (Luhmann, 1995a) enabled the research to reveal one of the mechanisms underlying the ability to focus on selected aims. The conceptual understanding that communications are only 'information' when treated as such by the recipient is a valuable analytical tool that further reveals reflexive influences.

This study provides support for the utility of the notion of the connectivity of communicative events in the analysis of organisational behaviour, enabling issues such as responsibility, authority, perceived boundaries and effectiveness of control systems to be drawn out of narratives.

The 'autopoiesis' of interactions is illustrated in the mutual perception of persons who are able to respond to each other in real-time, and this concept underlies the explanation of existing controls that minimise risks to organisational success. The reference to other could be seen in relation to risk management governance. The theoretical construct was developed to illustrate that organisations recognise the communication of regulatory goals and objectives as information, which instructs the attention of internal and external

observers of the organisation. This theoretical approach reveals dual risk management processes; the risk register process as a response to non-compliance risk, and the existing management control systems as a response to measures designed to enable access to funding. Both systems provide illustrations of an autopoietic response.

The risk management training was a communicative event for attendees. Two out of the three cases were stimulated to respond, confirming Luhmann's (1995a) suggestion that social systems use communication to enable them to engage in action. Significantly, this fleshing out of the theory extends the scope of SST to include a 'critical theory' role within a MRT framework to enable both organisational change and ability to influence self-referential views, refuting criticisms of this aspect of the theory by Habermas (Habermas & Luhmann, 1973).

The notion that a system maintains itself by dynamic conservatism in the face of environmental disturbance sheds light on the general view that not to spend constituted the least risky option for senior management, contributing to organisational inertia.

In the case study context, the notion that liability could be avoided by communication of ignorance forms an important element of the theoretical frame. It was evidently preferable not to receive messages about potential problems, to remain in ignorance and avoid the possibility of accountability and blame. The other side of this construct demonstrates that when communication about a risk was issued the sender expected responsibility for managing it transferred with the message; but the recipient kept quiet, perhaps ignorance could still be claimed should the risk become a negative outcome.

One important advantage of the use of SST over the more traditional MRT approach of using skeletal theory derived from Habermas, is the inclusion of the effect of power relations in the organisation (Broadbent, 1992; Soin, 1996). Luhmann's idea that hierarchy channels conflict and, in relation to financial authorisations for risk reduction measures, only superiors can decide, whereby

disagreements within the organisation are resolved. In the absence of other communications, financial decisions become information on which understandings of risk acceptability are founded. The theoretical frame interacting with the data illustrated the impact of power and financial authority on risk management activity, reducing the benefit of involving those without sufficient authority to act.

The SST framework was developed and fleshed out into analytical categories that provided the section headings for Chapters 5 & 6 of this thesis. Through interaction with the empirics, the theory provided concepts and illustrations that were insightful for the analysis and understanding of risk management implementation in an organisational context. Furthermore, the skeletal frame encourages second order observing, proving unexpectedly good at drawing out issues relating to responsibility and authority as understood by organisation members.

In addition, the DDE framework made use of interpretations developed through the SST analysis. The DDE alignment with the recommended model facilitated the normative analysis of the findings. This two-tier approach provides a contribution to the debates about the MRT research approach (Laughlin, 2004; Lowe, 2004; Gurd, 2008), confirming that use of alternative theoretical frames is compatible with the research approach and can enhance MRT in a critical theory role.

Reflexively, I note that the development of SST in this study draws on my experience of management system assessment[22], and the categories developed are likely to reflect my understandings of systems analysis, and may explain why SST was accessible and insightful for me, even though Luhmann is famous for a writing style that is hard to read (Gumbrecht, 2006). This section has highlighted both the contribution the theory made to generating important revelations about risk assessment processes and organisational risk, and how the empirical evidence fleshed out the theoretical constructs to develop SST in the

[22] As a qualified ISO9001, ISO14001, EFQM and CMM assessor with over 15 years experience of audit and assessment

field of operational risk. Furthermore, the thesis contributes to the debates about utilising an MRT approach to research, illustrating that different theoretical frames can be used within a single study, and that there are benefits from doing so.

8.4 Limitations of the Research

The first stage of the study gathered data from the Head of School or Department. The selection of senior academic management, senior administrative management and technical management staff for the training sessions reinforced this perspective. No views were elicited from more junior members of staff. Consequently, the study does not reflect the views of the lower levels of the institutional hierarchy, but since the findings reveal little benefit to involving those without authority to act, concern about this bias reduced as the analysis progressed.

With the benefit of hindsight, it would have been useful to directly question workshop participants about the aims of the organisation on the feedback forms (enabling individual responses to be gathered) to facilitate cross-case analysis. The responses in the first stage provided some interesting data, and I regret not having given myself the opportunity to explore it further.

While the interviews and risk training workshops involved a small number of staff (39), each participant provided detailed narratives. A review of the data gathered confirmed that each session added some new material to the overall study. Each interaction provided new perspectives and did not merely reiterate what had been covered previously, but also revealed features in common with other transcripts. Since the sampling did not approach saturation point, additional groups could have provided further risk perspectives (Morgan, 1997). Notwithstanding, the data provided rich insights into what was understood to constitute risk to participants. Since the analysis did not require a minimum number of data points to ensure statistical validity, the detailed discussions of relatively few staff provided vivid illustration of commonalities and differences to enable valid conclusions to be drawn, e.g., use of internal communications to

transfer responsibility for risk. Whilst additional data might illustrate how local differences (including position in hierarchy and other roles) influence risk concerns, the data set was more than sufficient to provide answers to the research questions being asked.

8.5 Suggestions for Future Work

The thesis opens up new areas for investigation through the identification of gaps in the literature. The detailed understanding of risk interpretation, combined with theoretical model development, could be used to design a survey instrument to gather less detailed, but more numerous, responses across a range of organisations to shed light on the extent of identified barriers to the implementation of an integrated approach to risk management. Furthermore, the use of financial decision making as an organisational communication about risk raises interesting questions for future research into other management control systems, particularly in relation to staff perceptions of organisational strategy.

The research in the area of operational risk assessment could be further explored by comparison of a HE case study with a similar one in a private sector organisation, but obtaining research access for a similar in-depth 3-year study poses a significant barrier to this potentially valuable comparison. The literature indicates that qualitative assessment remains an issue to be clarified and resolved in both contexts (Crouhy et al, 2006). Similarly difficult to access, a comparison with another HE institution would have benefits in relation to data validity and could indicate whether it is possible to generalise about the role of internal organisational context in relation to influences on the risk assessment process.

In addition, the data suggested a potential benefit to including members from different groups in training sessions. One session included a member from a different group in the workshop, enabling gaps in organisational practices to be identified. Future research should consider how to include individuals from different parts of the organisation, if a similar workshop method is used.

Furthermore, the data set gathered here is of significant value in itself. The MRT research approach suggests there may be benefit is developing an alternative theoretical frame to investigate the same narratives. For example, analysis could focus on Simon's (1994) Levers of Control to draw out the links between risk management and 'strategy as practice'.

The study findings in relation to the implementation of HEFCE governance could be distilled into a 'white paper' to provide feedback to the regulator to enable the development of governance and monitoring in the future, building on the summary of recommendations to the regulator (Appendix 11).

From the perspective of practitioners, the recommendations for the project sponsor (Appendix 10) could form the basis for an 'action research' study that would further test and examine these research findings, to develop 'best practice' guidance based on an empirical foundation.

The use of workshops proved to be a useful way to access discussions about risks, and provided in-depth discussions that resulted in a rich data pool of illustrative and informative comments that shed light on the assessment of operational risk. This approach could be utilised to investigate other aspects of organisational practice for which training is being provided.

The focus on risk management could be broadened to examine other management control systems utilising the theoretical insights developed in this case study. The broad scope of risk management encourages interdisciplinary work in several related fields.

8.6 Concluding Remarks

As I reflect on the journey from initial study planning, while drawing final thesis conclusions, I have to admit that if I had really grasped the complexity and scope of risk management in organisations, I might have decided that I had

bitten off more than I could chew. It was impossible to keep this study within my original planned focus on risk assessment, as narratives enforced investigation of wider risk management, responsibility and governance implementation issues that act on the assessment of risk recursively.

However, as I near the end of my PhD experience, I realise how lucky I was to have the luxury of over three years research access to undertake such a detailed study. Coming to the study from a management systems assessor background, I had vague unease about the applicability of a risk assessment framework to the analysis of operational risk in organisations, especially one derived from safety assessments (which, experience has taught me, are difficult enough). The rewards of this study lie in the theoretical understanding that developed as the illustrative narratives began to populate the analytical framework. Furthermore, in wrestling with ontology, methodology and theory development during the course of the study, I have developed the necessary skills to undertake a critical academic study, a process I did not find easy.

The study provides a firm platform for a critique of formalised risk management frameworks and encourages the focus to shift from improving mathematical tools towards enabling organisations to recognise risk management within existing practice. This is vital to enable formal risk management to be embedded in an organisation. From a practitioner perspective, in the recommendations for the project sponsor (Appendix 10), the research develops practical suggestions for improving risk governance implementation. The findings are used to support the aim of a more integrated and embedded approach, with greater utility than the existing approach of producing a risk register to put in a drawer in preparation for external audit.

One problem that arose was one that I had not expected. The rich narratives and complex theoretical frame provided many insights that are significant, making it difficult to decide which are the key findings in this study. Using the SST frame, reflexive concerns of the reader will place greater emphasis on some aspects of the research than others. The following paragraphs attempt to summarise key issues, to complement the findings detailed in the previous

chapter, and the contributions to the literature outlined at the start of this chapter, to draw this thesis to a conclusion.

The study forms a preliminary step towards a greater understanding of what operational risk means to different organisational participants and how concerns are assessed. It seems appropriate to revisit the definition of risk management discussed in the literature review. When risk is interpreted as H&S risk, as it is by the majority of participants, academics will avoid contact with risk management systems, and are able to deflect responsibility to administrators, with serious consequences for the utility of the risk register. Despite the lack of consensus about what 'risk' is in the literature, this study contributes to an understanding of how risk is manifest from organisational members perspectives, and provides valid and enlightening views, even if risk itself remains an essentially contested concept. The role of risk management has expanded the scope of the activity from the traditional focus on calculable probabilities, to a more qualitative setting, and confirms the notion of the 'Risk Management of Everything' (Power, 2004a).

This study contradicts the Better Regulation Group (2004) suggestion that universities behave unreasonably in response to regulation. In acting to maximise access to funds and attract high quality students, from the perspective of the organisation's aims they are acting in accordance with risk governance demands. The study supports the notion of a slide towards a "compliance culture" in the HE sector that doesn't offer intelligent challenge to such external demands (Better Regulation Group, 2004). However, rather than examine the outcomes from the perspective of those regulated, it is easier for regulators to dismiss regulatory malfunctions as the result of human fallibility or human idiocy, rather than representative of inherent systemic dysfunction (Gregersen, 2003; McGoey, 2007). The participants did expect unreasonable regulation, however, they did not interpret regulation unreasonably, but attempted to reduce risks to acceptable levels.

A lack of academic engagement with the implementation of NPM accountability regimes has contributed to negative outcomes for the development of

governance frameworks (Better Regulation Group, 2004). This study represents a move towards a critical engagement that enhances the ability to challenge regulatory approaches, using the in-depth case study approach to highlight potential weaknesses, and enable a dialogue that is based on a structured theoretical perspective fleshed out by illustrative narratives. The descriptions illuminate an area about which little is known; how formal methods are actually used in practice in an organisation (Langley 1998), enabling the implementation of risk management governance to be understood from participant perspectives. The normative emphasis and the procedural difficulty of implementing the HEFCE risk management guidance are evident, while existing controls continue to mitigate risks to the organisation, but cannot be recognised as 'risk management' practices.

The empirical contribution is valuable, both in the sense of new data to shed light on a little explored facet of organisational life, but also in providing feedback to regulatory and funding bodies and the project sponsor to enable barriers and weaknesses in the model and its implementation to be more fully understood. In relation to those who participated in the workshops, there is the additional contribution of utilising reflexive theory within an organisational context to reduce self-imposed barriers; the role is already within their normal range of activities.

In conclusion, this study provides rich descriptions of the separation of formal risk management processes from other existing controls to demonstrate how this undermines an important relationship. The institution displays an inability to implement high-level control systems, except in a most superficial way. The strategic plan should be guiding the organisation towards achievement of aims, as should the risk management process. The accounts provide compelling evidence that neither formal system had utility for those that participated in the research. Mitigation actions are more deeply embedded in informal risk management practices, such as traditional meetings and existing lower level control systems. For those lower down the hierarchy the organisational environment was severely deficient for the formal risk assessment process in relation to clarity of aims, preferred means of achieving them and calculative

difficulties, compounded by the evidence that senior management had no idea what constituted acceptable risk to the organisation. Most significantly, responsiveness to financial threats associated with transparency measures was strongly evident, but participants were unable to recognise associated changes in organisational practices as 'risk management'. The University is ready for a compliance audit of risk governance, despite weaknesses identified in implementation, while paradoxically, it continues to manage risks as it has always done, through existing management practices, without reference to any formal risk assessment.

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Thesis Appendices

Appendix 1: Information Sheet

Risk Assessment at [University name] ***Protocol Number REPSSPP(W)-05/06-83***

INFORMATION SHEET FOR PARTICIPANTS

YOU WILL BE GIVEN A COPY OF THIS INFORMATION SHEET

I would like to invite you to participate in this postgraduate research project. You should only participate if you want to; choosing not to take part will not disadvantage you in any way. Before you decide whether you want to take part, it is important for you to understand why the research is being done and what your participation will involve. Please take time to read the following information carefully and discuss it with others if you wish. Ask me if there is anything that is not clear or if you would like more information

1. This study will take place during risk management training sessions in which the volunteer will be requested to participate. Such participation is entirely voluntary.

2. The study takes place in the context of HEFCE guidelines recommending the use of risk management within HE establishments. The college council is funding this study to gain a better understanding of the issues involved in implementing their guidance. Risk assessment is a key process in the recommended risk management model. The project aims to gather data illustrating how qualitative risk assessment decisions are reached. The study is aimed at understanding the organisational context in which these decisions are reached, and whether professional background has an impact on assessment outcomes. The aim is to ensure that risk assessment processes will be easier for staff to use and local issues are taken into account in guidance documents.

3. Participants will be invited to take part in 2 hour training sessions. Internal Audit has produced a course that will be delivered by the researcher, in the role of training consultant. The research aspects relate to the audio and video recording of risk identification and risk assessment activities during the course.

4. There are no exclusion criteria for this project, but Internal Audit and local management will take part in agreeing who should be trained.

5. No risks, inconvenience or discomfort may reasonably be anticipated.

6. It is hoped that benefits to the volunteer will accrue as a result of the risk assessment process being appropriate to different schools and departments across the college.

7. Anonymity and confidentiality of personal information will be preserved by non-attribution of quotes. Where naming a department would provide a clue to the identity of the individual, quotes will not be used, but summarised in a way that prevents such identification. Data will not be stored using individuals names. The information will be accessible to the PhD student and the project supervisors. All data will be stored in accordance with college requirements.

8. In the event of your suffering any adverse effects as a consequence of your participation in this study, you will be compensated through the [University] 'No Fault' Compensation Scheme.

Please contact Sharon Wheatley ([e-mail address]) should you require any further information or clarification.

It is up to you to decide whether or not to take part. If you do decide to take part you will be given this information sheet to keep and be asked to sign a consent form. If you decide to take part you are still free to withdraw at any time and without giving a reason. A decision to withdraw at any time, or a decision not to take part, will not result in adverse consequences.

Appendix 2: Interview Protocol for First Stage Interviews

Each interview was prefaced with the following standard introduction, or as near as possible, depending on interviewee questions or comments.

> This project explores how risk is managed in the College, and aims to develop and evaluate systems that suit a research lead university.
>
> The aim of these interviews is to produce a general overview of hazards and perceptions of risks in the different schools within the college. We need to work with schools to establish how risks are currently managed.
>
> The interviews are expected to last around one hour. We will be asking general questions about the types of hazards present in your schools, the systems you have for monitoring and managing them, the availability of data on incidents or events where control has failed and evidence related to where risk control has succeeded.
>
> We would like to request permission to record this interview. The interviews will then be transcribed and you will be able to comment on the transcription.
>
> The data from these interviews will be used to provide a report summarising the current state of play within the University. The anonymity of all interviewees will be protected. All recorded data will be treated as confidential.
>
> Thank you for agreeing to take part in study.

The numbered points below are the interview questions. Prompts, to be used when interviewees are unable to respond, are indicated by a lower case letter.

Some general questions about your School or Department.

1 Can you tell us how many staff and students you have in your School/Department?
2 On what sites do the School/Department's activities take place

Some general questions about the objectives of the College and threats that your School/Department experiences.

3 What are the aims of the university and school/department?
   a. No prompt required, just see what perception each school has, if any
4 What risks do you actively manage in your school/department?
5 What threatens your school/department achieving its objectives?
   a. Health &Safety
   b. Threats to research – reputation, staff retaining, recruitment, teaching commitments, PhD completions
   c. Threats to teaching – reputation, poor students, PhD completions, academic appeals, student numbers
   d. Regulatory compliance – data protection, freedom of information, environment, safety
   e. Staff issues – employment law, recruitment and retention
   f. Facilities (including IT)
   g. Security – fire, theft
6 Which areas of risk are you most concerned about?
7 How do you know about the risks or threats that exist?
   a. Monitoring systems
   b. Incident reports
   c. Specific responsibility placed on individuals
8 Do you record or keep any data relating to threats or risk incidents or events?
   a. Student appeals
   b. PhD failures
   c. H&S records
   d. Environmental breeches
   e. IT breeches
   f. Data protection requests
9 Can you tell us about any incidents or events which were prevented as a result of awareness of possible threats to the school?
   a. Can you direct me to a source of information? People, records or reports.
10 Can you tell us about any failures that have occurred or things that we could learn lessons from?
   a. Can you direct me to a source of information? People, records or reports.

Thank you very much for your co-operation. We will forward the transcript as soon as we have done it.

Appendix 3: Data from the Pilot Study

Features of the Pilot Case and Demographics

All members of the Risk Management Centre were invited, and half were able to attend. The participants include a lower proportion of students than academic staff, which provides greater similarity with the proposed training groups.

Identifier	Role	Seniority	Length of service
P1A1	Academic	Senior	Long
P1A2	Academic	Senior	Recent
P1A3	Academic	Junior	Long
P1A4	Academic	Student	Medium
P1A5	Administrator	Junior	Recent
P1A6 (part-time)	Academic	Senior	Long
P1A7 (observer)	Administrator	Senior	Recent

Discussion of Narrative Data

The group identified risks to the successful implementation of a new course in relation to changes in organisation within the University. The Risk Management Centre were in the process of being moved from the [name] Institute, to form part of the Department of Geography. Consequently, this raised a number of uncertainties about administrative issues and future arrangements. Adding to this uncertainty was an acknowledged lack of experience in running teaching courses within the Risk Management Centre, which historically focussed on research activities. Use of Geography Department systems (e.g., student monitoring and complaint handling) was seen as the best way to mitigate this risk, providing that members of staff within the group were not alienated as a result. Other factors included the availability of key staff, student quality, availability of teaching rooms and student expectations.

Despite experience of Risk Assessment in the group, the recruitment of the required number of students was not considered until prompted by the researcher. The reflexive academic emphasis of the group made the quality of students of greater interest and concern than the numbers. In the ensuing discussion it emerged that the situation was

unclear, and that around 6 unconditional offers had been accepted; some way short of the target of 15.

The attraction and completion of research contracts was also considered, and the two aspects separated as different sources of risk. In the attraction of research funding reputation and publication history were seen to be key factors. Insufficient time was a threat to proposal preparation, and failure to include other departmental inputs and authorisations in planning for achievement of deadlines. It was notable that the balance of research grants, in which some provide full recovery of overheads, and others not, was not considered, although it was an identified source of risk for the organisation as a whole.

In the completion of projects some internal administrative arrangements were identified as a risk:

> *Personnel department and their processes, it's not just the people, it is the whole process we have to go through. So, you actually have to get the money in our bank before they let you advertise, which means that you are already 3 months behind. [P1A1]*

In addition, management arrangements for research contracts were perceived in a similar vein. Poor IT arrangements were cited as a risk.

The Risk Assessment discussion first focussed on reputation, and then considered what control systems were in place to prevent student dissatisfaction, and use of Geography Department systems was identified as the safest approach.

Concerns about the quality of students related to the high proportion of overseas candidates, with qualifications that may be difficult to equate to UK degrees and potential difficulties with fluency of English. The possible impact was assessed as 4 or 5. In considering the frequency, more general issues about the grades of students applying for the course were raised in relation to perceptions of the University and marketing strategy, since the grades of applicants were lower than anticipated when preparing the course. There was considerable difficulty assigning frequency rating to the risk from poor quality students, but the group expert in Risk Assessment sums up:

So, for these two what do they come out as, they come out as a 3 and a 3, a 3 and a 3 is medium, and a 4 and a 5 or even a 3 and a 5 would have been high, so it doesn't really matter whether we said that it's a 3 or a 4 or a 5. [P1A1]

This illustrated a potential problem with a rating system based on banding across a grid, in that you can work backwards to assign a number to produce the overall rating that is desired.

The group briefly discussed mitigating actions that might be taken to improve student quality for the following year, mainly focussing on admissions procedures. This reiterated a number of concerns about current arrangements:

You've got me more and more worried about all these things. [P1A7]

This attendee confirms that the risk workshop focuses attention on issues relevant to the group, and could be considered a good Risk Assessment session. Actions to be taken as a result were discussed after the presentation was complete.

The pilot study provided confidence that the risk management workshops would be a valuable approach to collecting narratives during risk identification and assessment activities, and gave the sponsor the opportunity to review the course delivery to confirm that data gathering would not prevent achievement of the intended learning outcomes. Furthermore, participants explicitly stated that the presence of video and audio recording equipment did not influence their discussions, since they forgot it was there once they started.

Appendix 4: Training Session Slides

The following pages contain the training material used in the two Estates & Facilities workshops. Those slides that were tailored to focus on local issues are indicated by an asterisk next to the slide number, where appropriate. The remaining material was common to all training sessions.

Slide 1*

Slide 2

Slide 3

Identification, Analysis and Management of Risk

Risk Identification -

Is the identification of the internal or external factors (Risks) that might impact on our ability to meet our business objectives, at College, School, Departmental, Project or even personal level

3

Slide 4

Identification, **Analysis** and Management of Risk

Risk Analysis -

Is an estimation of the potential likelihood and impact of the risk if it were to come to fruition, together with a comparison of these factors to our **risk appetite**, to determine if we need to act

4

Slide 5

Identification, Analysis and **Management** of Risk

Risk Management -

Is the application of a set of activities to a particular risk or group of risks to prevent, avoid or reduce the impact or likelihood of the **residual risk** to an acceptable level

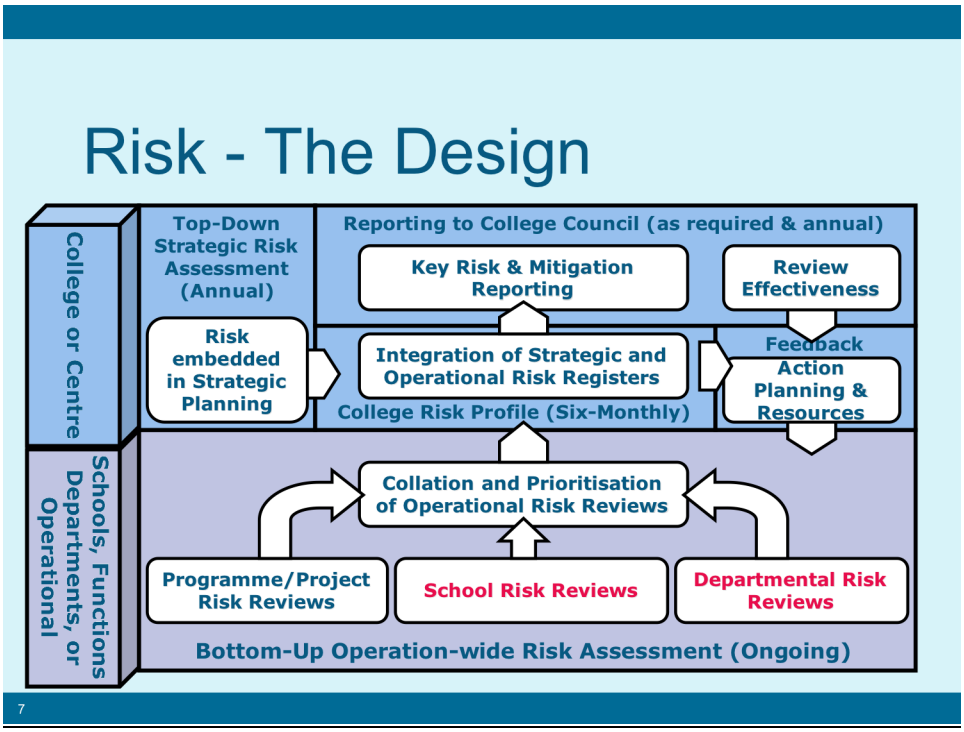
5

Slide 6

Handling Risk

6

Slide 7



Slide 8

Slide 9

Risks and Objectives

RISKS are linked to OBJECTIVES.

A precondition of managing risks is the establishment of objectives

9

Slide 10*

Levels of Risk

Level	Objective	Risk
Strategic	To be a world class University	Unable to compete with resources of US institutions
Institute	To provide a top class working environment	Cost of maintenance
Department	To provide high quality facilities	Management of contracts and sub-contractors
Project	Site refurbishment	Problems uncovered during course of work
Personal	Career progression	Lack of opportunity for promotion

10

Slide 11*

Categories of Risk

HEFCE
- Health & Safety
- Financial
- Estates
- Strategic
- MIS
- Students
- Reputation
- Staffing
- Teaching
- Overseas Ops
- Research

University - 2006
- Staffing
- Students
- Research
- Knowledge Transfer
- Information
- Capital Financing
- External Economics
- Reputation
- Health & Safety

Estates & Facilities - 2007
- As University plus:
- New regulations
- Emergency plans
- Outsourcing contract failure

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Summary

- ✓ Handling Risk is necessary to enable achievement of aims
- ✓ Risks are reported and reviewed at the highest level, after both top-down and bottom-up consideration
- ✓ Handling Risk involves the identification, analysis and management of Risks
- ✓ Risks are linked to Objectives and exist at every level in the College
- ✓ Risks can be categorised at different levels

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Risk Identification

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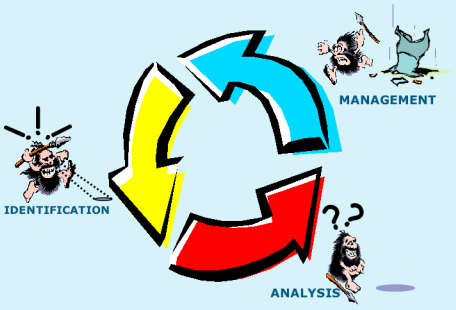
Risk Identification

- Process is ongoing and iterative
- Essential part of Control
- Internal or External factors
- Linked to explicit or implicit objectives
- Integrated with business planning processes
- Suspend judgement



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Factors to Consider

- Changes such as competition, regulation, personnel, technology
- Past failures to meet or achieve targets or objectives
- Quality of personnel or partners
- Complexity of activities
- Rapid growth or new activities
- Restructurings or organisational change

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Risk Identification - Example

Estates and Facilities Objective

Comply with carbon emission legislation

Possible Risks

- Requirements unclear
- Funding
- Age of the estate
- Lack of knowledge about methods of reduction or offsetting

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The first workshop discussion takes place at this point in the training

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Risk Analysis

- Risk analysis involves estimating:
  - Potential significance the risk may have on the entity/department/ project **(IMPACT)**
  - The likelihood or frequency of the risk occurring **(PROBABILITY)**
  - Using these estimates to prioritise the identified risks and determine the need for action **(STATUS)**

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Assessing Impact (examples)

Category / Score	1 Low	2	3	4	5 High
Financial Loss	<£10k	£10k - £100k	£100k - £1m	£1m - £10m	>£10m
Reputational Loss	Damaging article in Student Press	Damaging article in Locals	Measurable impact on relations	Damaging articles in Nationals	Wide –ve TV / Radio coverage
Life and Limb	Minor reversible injury	Minor irreversible injury	Major reversible injury	Major irreversible injury/death	Multiple deaths
Service Quality	Minor contract failures	Serious contract failures	Some defection to competitors	Major contract failures	Large scale defection to competitors
Business Continuity	Minor recoverable interruption	Recoverable interruption <24 hours	Recoverable interruption >24 hours	Permanent loss of data, interruption	Total cessation of business

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Assessing Probability

Score	1 Low	2	3	4	5 High
	Once per 10 years or greater	Once per 5 – 10 years	Once per year	Once per term	Once per month or all the time

- Whatever scale is chosen for either assessment, it must:
  - Be relevant to the institution
  - Be easily understood
  - Provide a common formula
- It is not an exact science

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Types of Risk

Inherent Risk

- The risk estimates **prior** to considering controls and mitigation already in place

Residual Risk

- The risk estimates **after** taking into account any existing controls or mitigation

When analysing risk for impact and probability, try to use Residual Risk to determine scores

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Risk Status Matrix

HIGH

FREQUENCY

5	MED	HIGH	HIGH	HIGH	HIGH
4	MED	MED	HIGH	HIGH	HIGH
3	LOW	MED	MED	HIGH	HIGH
2	LOW	MED	MED	MED	HIGH
1	LOW	LOW	MED	MED	HIGH
	1	2	3	4	5

IMPACT

HIGH

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Risk Appetite & Status

- Risk is not necessarily bad (research, entrepreneurialism)
- Risk Appetite is a measure of how much risk we will accept as an organisation (balance of risks versus rewards)
- Generally, with a normal risk appetite, **HIGH** status risks should be reported upwards and action taken to reduce impact or likelihood to acceptable levels (Risk Management), and
- MEDIUM status risks should be considered for mitigating actions (Risk Management) and reporting, especially if outside of local control
- LOW status risks are probably acceptable, but should be monitored for changes in status

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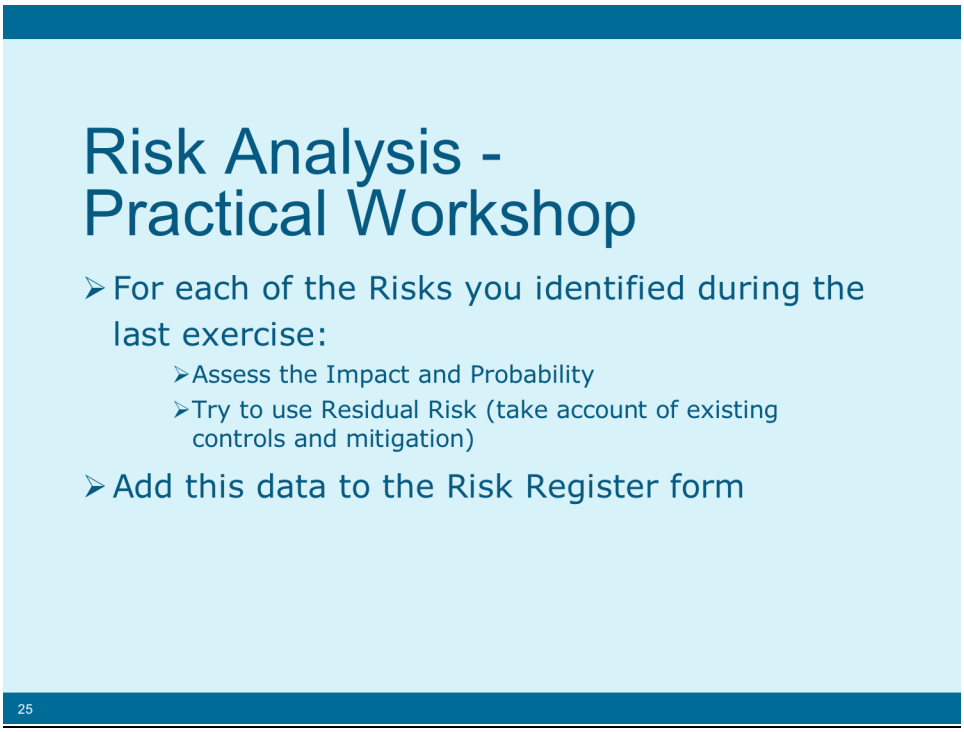

The second workshop discussion takes place at this point in the training

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Slide 27

Risk Management

- Risk Management involves taking action to reduce risk status to acceptable levels. This can be by:
  - **Transferring** all or part of the risk (usually through insurance or partnership arrangements)
  - **Avoiding** the risk by withdrawing from an activity
  - **Managing** the risk, for example by improving existing controls or obtaining more information
  - A combination of two or more of these things
- The costs and resources required for mitigating actions should be proportionate to the original risk
- Actions should be **prioritised**, and **responsibility allocated** and **timescales** agreed

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Risk Management - Example

Objective

- Compliance with carbon emissions legislation

Risk

Insufficient funding

- Impact = 4, Probability = 4
- Risk Status = HIGH
- Remedial Action needed to reduce status to acceptable levels
- Regular reporting needed

Mitigating Actions

- **Transfer** by passing responsibility to another management team
- **Avoid** by lobbying for change of objective in relation to existing buildings
- **Manage** estates and facilities planning activities to reduce probability of failure

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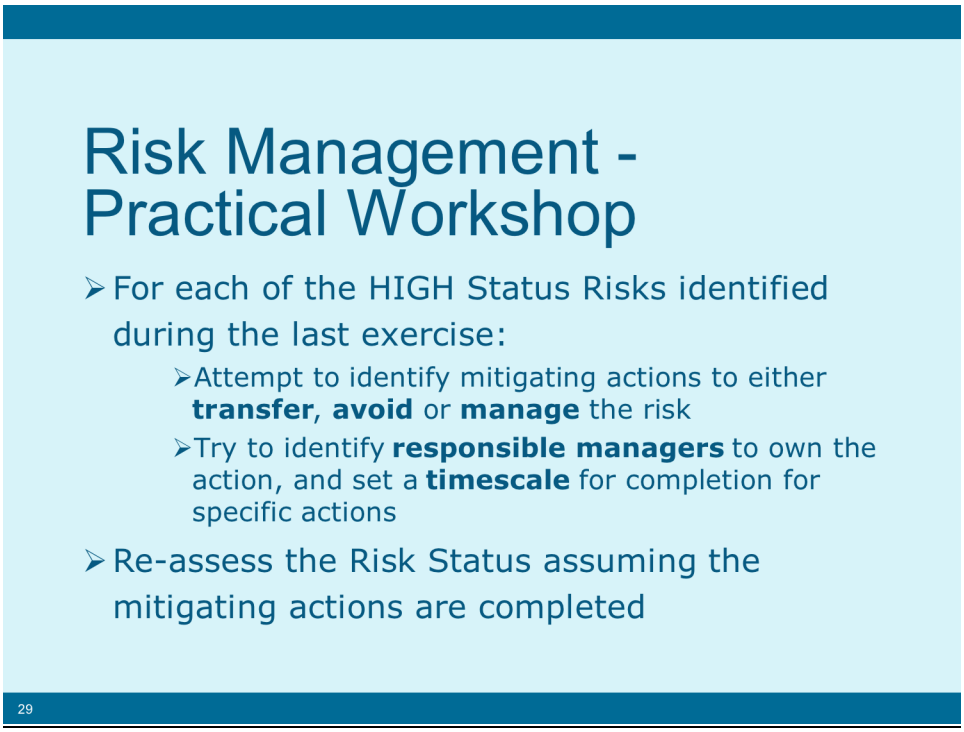

There was insufficient time in the training sessions for this workshop discussion, except very brief comments. Furthermore, there were no risks rated (as 'high' or any other value) in the earlier workshop discussions.

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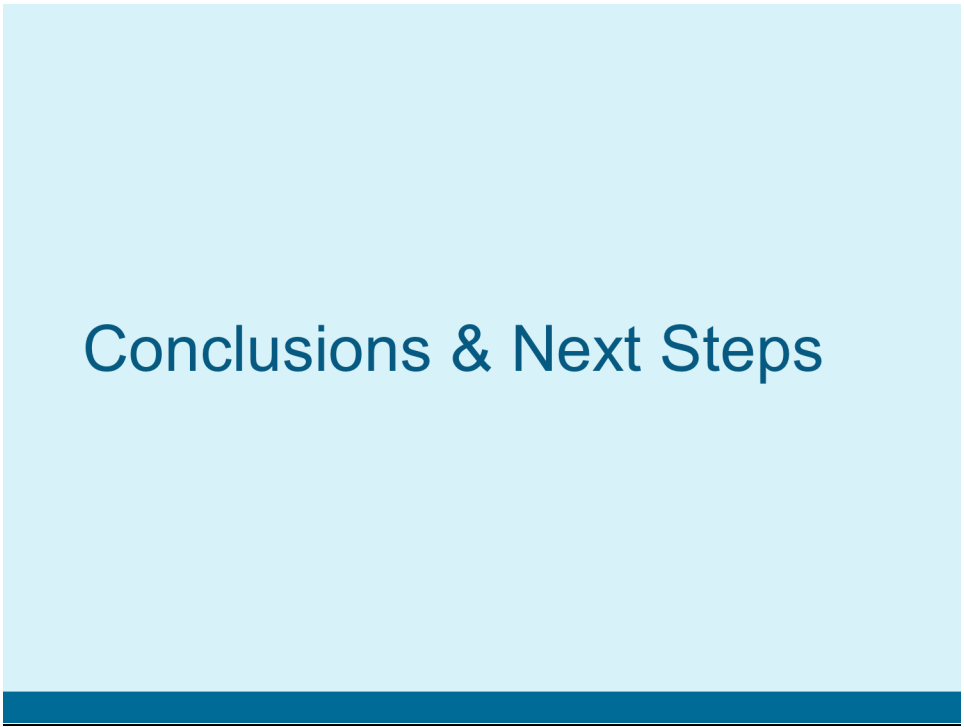

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Some Closing Thoughts

- Identification, analysis and management of risk is necessary at all levels of the organisation
- Handling Risk is not an exact science
- Eliminating ALL risk is neither possible nor desirable
- External risks are more difficult to manage– for these we may need to settle for early-warning indicators

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Next Steps?

- A very small sample of objectives have been considered today
- Extend work done today to look at all of your objectives in your area of responsibility
- Use the results to report high status risks and fight for resources
- Over time, develop a comprehensive integrated operational and strategic risk register

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Tracking Mitigation Actions

- Self-assessment by risk owners
- Regular reporting and review (business-as-usual processes)
- Reports to Audit Committee or other groups
- Internal Audit follow-up and audits
- External Audit

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Benefits of getting it right

- Support for strategic and business planning
- Quickly grasp new opportunities
- Reassurance for managers and for stakeholders
- Fewer shocks and unwelcome surprises
- Promotes continual improvement
- Supports effective use of resources and claims for additional resources
- Enhances communication and understanding between departments
- Helps achieve goals and targets, enhances reputation

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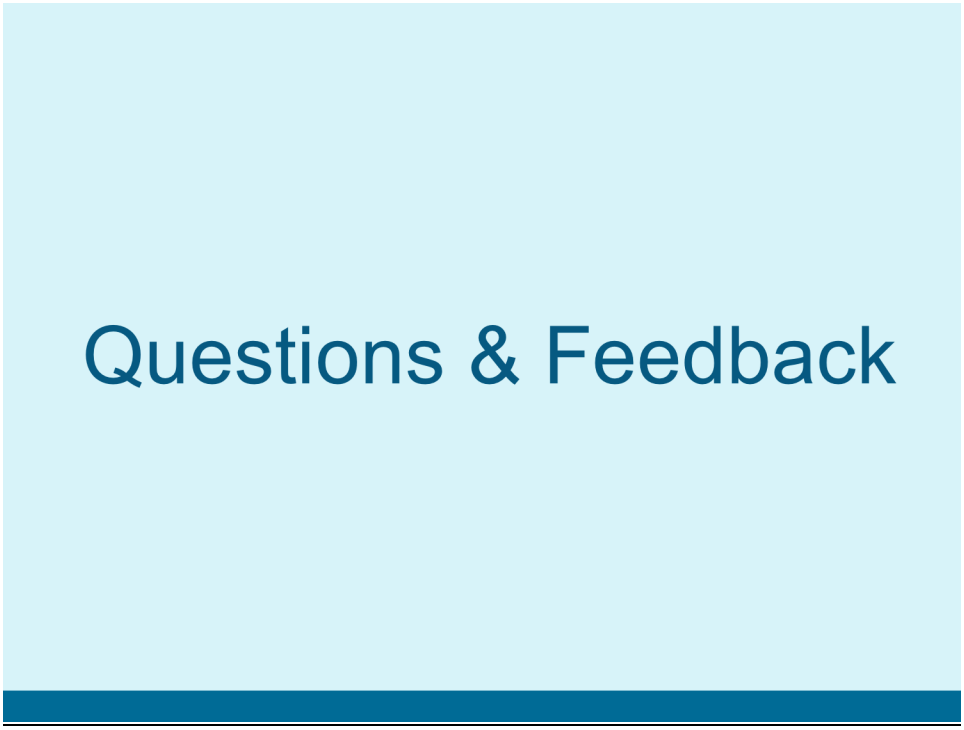

Appendix 5: Anonymity Coding for Training Attendees

All participants had been with the organisation longer than 5 years, except where (recent) is indicated

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Code	Group	Role	Experience H&S
T1A1	Dental Institute	Academic/Manager	Y
T1A2	Dental Institute	Academic/Manager	Y
T1A3	Dental Institute	Administrator/Manager	Some
T1A4	Dental Institute	Academic/Manager	Y
T1A5	Dental Institute	Academic/Manager	N
T2A1	Estates & Facilities	Manager	Y
T2A2	Estates & Facilities	Manager	Y
T2A3	Estates & Facilities	Manager	N
T3A1	Estates & Facilities	Manager	Y
T3A2	Estates & Facilities	Manager	Y
T3A3	Estates & Facilities	Manager	Y
T3A4	Estates & Facilities	Manager	No data
T3A5	Finance Department	Manager (recent)	No data
T4A1	Biomedical & Health Sciences	Technical Manager	N
T4A2	Biomedical & Health Sciences	Technical Manager	N
T4A3	Biomedical & Health Sciences	Technical Manager	Y
T4A4	Biomedical & Health Sciences	Technical Manager	No data
T4A5	Biomedical & Health Sciences	Technical Manager	Y
T4A6	Biomedical & Health Sciences	Technical Manager	N
T4A7	Biomedical & Health Sciences	Technical Manager	No data

Appendix 6: Reflections on Workshop Data Validity

For each training session, the balance of conversation between attendees during workshops was analysed. The following graph illustrates the percentage of comments attributed to each individual in their session.

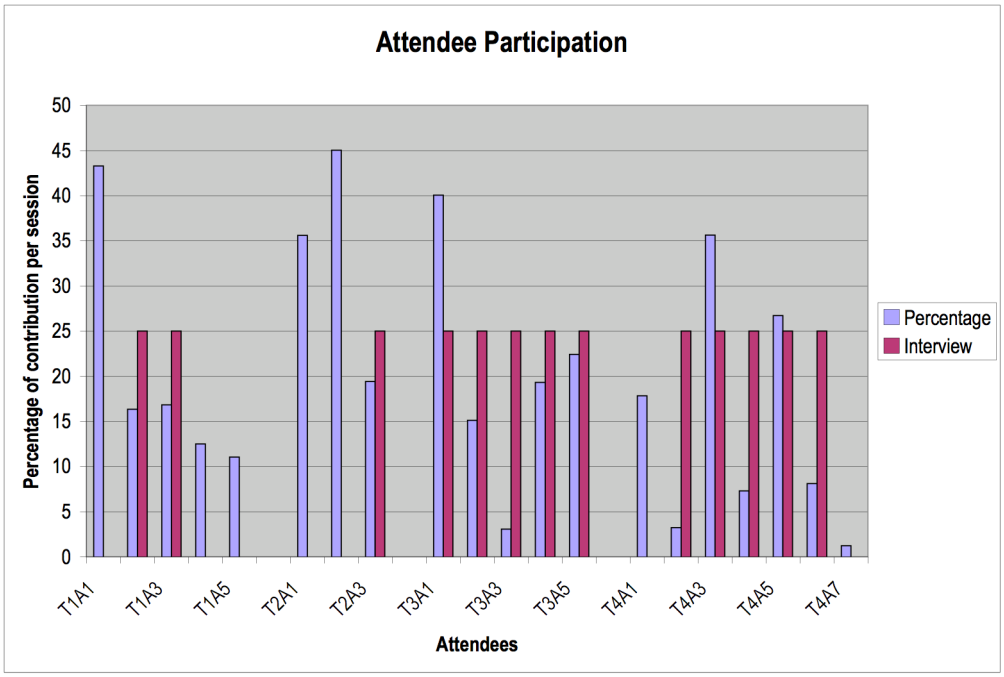

Figure A10.1 Attendee Participation in Training Sessions and Follow-up Interviews

One individual contributed over 40% of the comments attributed in the first session, whilst the remainder accounted for between 10% and 17% each, indicating remarks were fairly well distributed amongst other members.

The second session had only three attendees, who all contributed over 18%, with two members being more vocal than the other. The third group came from the same Department as the second. One individual dominated this session with over 40% of the comments, with one member making less than 5% contribution. The remaining attendees accounted for between 15% and 23% each.

The final session had the most attendees of any workshop and two individuals provided over 60% of the comments between them, another provided over 17% and consequently the remaining four members of the group contributed less than 10% each, with two below 5%.

Whilst I was aware of imbalances in contribution between members, and attempted to involve those who are not participating, it was difficult to disrupt the natural dominance of individuals in groups, particularly where this related to seniority, as in the first three cases.

The 13 follow-up interviews allowed the researcher to compare willingness to participate in follow-up interviews with contribution in the workshops. In the first two sessions, the dominant speakers did not volunteer to take part in the interviews, encouraging the researcher to assume they had expressed their views on the subject adequately during the session, taking into account other work commitments. Figure 7.2 illustrates that the uneven participation does not indicate a lack of engagement with the training, and the majority of those who agreed to be interviewed were those who participated least, and took the opportunity to express their views in the interview. Only one member of staff who contributed less than 5% did not agree to be interviewed. In addition, several expressed the view that it was informative to hear the more vocal colleague, with perceived gains from understanding their perspective. There was no expressed resentment about any conversational imbalance in the workshops. An analysis of the data on the feedback forms is included in Appendix 8.

The interviewees confirmed that they felt able to talk freely in the sessions:

> *I think everybody here is quite open. [T2A3 Manager interview]*

> *There was no problem about any reticence to say what you felt. [T3A4 Manager interview]*

Another felt that although there was no intimidation within the area he/she worked in, some other parts of the College might not encourage staff to express their views freely:

> *I can see that could be a problem with some groups. [T3A4 Manager interview]*

From a data-gathering point of view, the workshops and interviews provided rich and varied descriptions of operational risk and from that perspective were very successful. However, the tailoring of sessions made comparison of the resulting narratives more difficult. Since sessions in different Departments or Schools were focussed on different issues, this introduced an artificial element of differentiation between groups. Nonetheless, common themes emerged, and detailed data provided rich descriptions of the influence of local views on the risk assessment process. The tailoring was important to enable attendees to engage with the training material, and, in this sense, provided the accounts desired.

Reflexively, the three training groups took a different approach to the researcher as presenter of the training material in the role of participant-observer. The DI members treated me as a management consultant linked to the Internal Audit Department. They took the opportunity to provide feedback to the Internal Audit team about risk management process concerns and were interested in discussing possible methods to integrate the requirement with existing practices. The E&F group considered me as a PhD student, providing input to senior management through research outputs. The BHS group, by contrast, treated me as an emissary from senior management, delivering communication on organisational requirements. However, in all cases the data supports the view that attendees felt able to discuss risks openly, but reflexive considerations indicate that many of the narratives contained in this study represent attempts by individuals to communicate with senior management via the researcher.

Appendix 7: Workshop Evaluation Form

HANDLING RISK WORKSHOP EVALUATION FORM

Basic Workshop Information

Date Held:	Monday 5th March 2007		
Location:	Capital House		
Workshop Facilitator:	Sharon Wheatley		
Completed By:			
Job Title:			
Department:	Estates/Facilities* (delete as appropriate)		
Experience of Risk Analysis:	Y/N	Length of Service	

As a Participant your feedback is important to us in monitoring the value of the Workshop and to enable us to make improvements for future sessions. We would therefore be grateful if you would answer the following questions as fully and honestly as possible. Please tick the appropriate box and add your comments in the spaces provided.

General Feedback:

		V. Good	Good	Fair	Poor
Pre-Workshop Administration & Organisation:	*tick one:*				
Training Room & Equipment	*tick one:*				
Catering Arrangements:	*tick one:*				

The Workshop

		V. Good	Good	Fair	Poor
Quality of Visual Aids (handouts, slides, etc.):	*tick one:*				
Appropriate balance between theory & practice:	*tick one:*				
Workshop content relevant to your work:	*tick one:*				

What sessions did you find most helpful and why?

What sessions were least helpful and why?

The Facilitator

		V. Good	Good	Fair	Poor
Understanding of your needs:	*tick one:*				
Knowledge of the subject & handling questions:	*tick one:*				
Presentation Skills - clear and understandable:	*tick one:*				
Maintained an environment conducive to learning:	*tick one:*				

Timing, Pace and Level

Was the pace of the workshop:	*tick one:*	too fast	about right	too slow
Was the duration of the workshop:	*tick one:*	too long	about right	too short
Was the level of the workshop:	*tick one:*	too high	about right	too low

Comments:

Would you be willing to participate in a 15 minute follow-up interview?	Yes/No

Thank you for taking the time to complete this form. Please hand to facilitator at end of session.

Appendix 8: Analysis of Training Feedback Forms

Feedback forms were completed by 19/20 trainees, and the data gathered shows that the training was generally well received, with over 87% of responses in the 'Good' or 'Very Good' scale. The following graph illustrates the feedback assessment categories and the number of responses in each case.

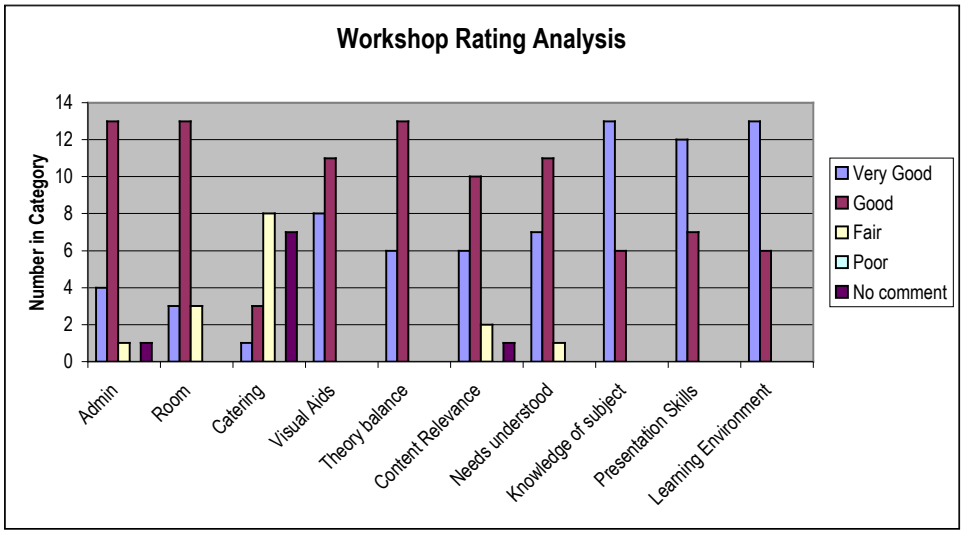

Figure A6.1: Feedback Form Data Analysis

The project did not fund catering at the training sessions, and there was some variability in whether the local area provided refreshments during the training. This was reflected in the poor ratings received for catering. If the catering scores are removed from the analysis, the 'Good' and 'Very Good' ratings increase to approximately 95% of the responses.

The forms enabled written comments to be added and this information (provided by 10 of the 20 trainees) stated the training was helpful, useful or good. No negative comments were received on the feedback forms.

The data confirmed that the training needs of the programme were being met, and in fact, surpassed the researcher's expectation of satisfaction with the training. As one attendee stated:

> I thought when we were first starting 'oh, we'll never fill up 2 hours' on that sort of thing, but, of course, once you get into it, and you know the academics certainly followed up afterwards and sort of said how useful it was.

In addition, some E&F staff felt it was nice to think that senior management are interested in views of staff across the organisation, and makes engagement with the Risk Management process seem more worthwhile.

Overall, the feedback confirmed that the content, pace and length of the course were considered about right by the vast majority of attendees.

Appendix 9: Interview Protocol for Training Follow-up Interviews

I just wanted to ask you about the training session you attended, particularly the workshop sessions, more than the actual training material.

Confidentiality and anonymity will be ensured, as outlined at the previous meeting.

5 What did you think was most useful about the risk workshops, in which local issues were discussed?

6 What did you think was least useful about the workshops?

7 Did you think the use of numbers in the assessment was helpful?

8 Did you think the sessions would lead to any follow up action?

9 Was there anything that you thought should have been discussed that wasn't?

10 What do you think is the greatest threat to the [name of School or Department]?

Appendix 10: Recommendations for the Project Sponsor

In recommending changes to the implementation of HEFCE risk management governance within the organisation, it is important to consider the question of what operational risk assessment is intended to achieve. Although theoretically it should be a means to improve risk management within an organisation by forcing senior managers to be accountable for the identification, assessment and control of risks they manage, the current implementation favours compliance with external targets, with use of a Risk Register to demonstrate compliance. This approach does reduce risk to the institution, but does not provide the other claimed benefits of the governance.

> *Recommendation: Clarify organisational interpretation of the role and purpose of the Risk Register, and include in training material*

Most participants did not identify local Risk Registers as part of any risk management controls they used, even when prompted. At present, within the University, the Risk Register is an artefact to show an external assessor that the University has taken HEFCE risk management requirements seriously and have taken steps to comply. This does not undermine its usefulness. Indeed, there are many who feel that that is the 'point' of a Risk Register; it enables an organisation to make itself auditable.

However, the focus on the Risk Register as a compliance tool reduces the system's ability to recognise that other control systems are acting as risk management systems. Risk is associated with H&S and formal Risk Register activity, both of which are identified as administrative roles, reducing the incentive for academic staff to engage with the process. The question arises as to whether the current risk management practices are designed with the organisational characteristics of Higher Education institutions in mind. As the literature review illustrates, academic freedom is one of the fundamental premises for academic work, but relies on large measures of autonomy both on an individual and organisational level. The imposition of enforced self-regulation and accountability is unwelcome to academics, who reserve the right to resist managerial control, and the individual Schools have the capacity to ignore changes that are seen to challenge their freedoms. Many Schools in Higher Education institutions remain conservative when it comes to organisational change, and provide a good example of 'autopoiesis' in attempting to change as little as possible in the face of environmental disturbances; only stimulated to respond to signals they interpret as a

threat to the survival of their system, linked to access to funding. In an increasingly competitive environment, there is a need to reduce the reluctance of academics to take responsibility for operational risk management.

> *Recommendation: include day-to-day examples of existing control processes within the policy document, describe them as 'Risk Management' and thereby demonstrate the involvement of academic staff in such activities (e.g., student progression).*

By demonstrating their participation in existing controls, reflexive views can be used to encourage the notion that Risk Management is indeed part of their normal role. This also has the benefit of facilitating integration between formal risk management processes and existing controls, which act to mitigate risks, but do not include risk assessment as part of the process.

> *Recommendation: utilise Risk Register outputs to enable integration with existing ways of working in the form of action plans, linked to existing processes (e.g., RAE concerns and RMAG activities).*

To successfully implement risk management systems, clear and defined accountability must be attached to senior management. The narratives suggest organisational control systems can only be embedded with senior management action and commitment. There is not sufficient authority to embed from the bottom up. Sharing risk between many individual staff members is not effective; everyone thinks someone else is doing it. Control systems have to be developed, implemented and maintained from above.

> *Recommendation: the existing Risk Management Policy is updated to strengthen and clarify the accountability for Operational Risk.*

This clarification enables the PCT to consider who should be involved in the annual review of Corporate Risks, an identified weakness in the current implementation.

> *Recommendation: the existing Risk Management Policy is updated to specify whom to involve in Risk Assessment.*

It is clear that those involved in the process expect to see some feedback (in the form of the Corporate Risk Register), and are unwilling to participate otherwise. In addition, the data provides evidence that power and authority are necessary to implement changes or mitigation actions, and reduces the benefit of including those at lower levels in the hierarchy.

Concerns about the confidentiality of the data recorded on these documents pose a threat in the form of secondary risk, should some concerns become widely known or publicised in the press. In a competitive environment, the type of information marked 'Company Confidential' in many commercial organisations also presents a danger if the communication passes to a competitor. The confidentiality status of the local risk data and Key Corporate Risk document is currently unclear.

> *Recommendation: to enable full disclosure risk documents should be confidential, with a limited distribution, further reinforcing the suggestion of limiting involvement with formal risk documents to senior staff.*

One of the major hurdles to address is whether the Risk Register is a tool for passing information upwards within the organisation, or whether it is intended to stimulate feedback about risks, and act to influence behaviour as a result, in line with the HEFCE framework. As well as improving communication up the line, a vital part of such a control system is an interactive loop of information flow.

> *Recommendation: the existing Risk Management Policy is updated to include the content and frequency of the feedback to be provided to those involved in the process.*

The competition between parts of the organisation can undermine attempts to reduce risk. The more powerful voices within the college are seen to shout down other less powerful voices. E&F and other infrastructure departments appear to have much less voice in an organisation where academics form the most powerful professional group.

> *Recommendation: the existing Risk Management Policy is updated to take account of competing aims within the organisation and to highlight the role of the PCT in enabling balances to be achieved.*

The risk assessment workshops provide strong evidence that the ratings produced cannot be considered a form of measurement, and that participants had difficulty in comparing risks. Some participants suggested that the narrative sections of the process were more valuable than attempting to rank risks. The difficulty of assigning numerical values, particularly of realistic costs, suggests that the process should not focus on methodologically difficult quantification.

> *Recommendation: simplify the risk assessment process by using qualitative assessments, and include summaries of narratives about causes and outcomes.*

It is clear that the existing semi-quantitative assessment is making it harder to engage people in risk assessment, with the majority refusing to quantify risk even in the most

superficial way. Moving to a qualitative assessment makes the assessment process less daunting, especially if frequency and severity are less important than descriptions of potential risk causes and ways to reduce negative outcomes. Existing management meetings are familiar to participants, and informally act in this role, if assessment ratings are not a mandatory feature of the outputs, and should be a recognised part of the risk management system in the University. As suggested by one group, inclusion of a risk review within meetings that are held as a matter of course could integrate risk management within existing practices. This may not produce a risk register, but would demonstrate a better understanding of how risks are actually managed in the organisation, and could be used to provide local inputs to registers as reportable risks arise.

One workshop illustrates the difficulty of inclusion of opportunity risks on the same scale as threats to the organisation. However, the 2007 Corporate Risk Register demonstrates that if these are framed in a negative way, as failure to grasp the potential gains, they can be included on the same scale.

> *Recommendation: the Risk Management Policy should include guidance on the Assessment of opportunities; consideration of impact and likelihood of failure to achieve potential gains can be used to enable comparison with threats to the organisation.*

The training course delivered to departments was useful in ensuring that staff took a broad view of risk, in particular clarifies that the activity is not primarily concerned with H&S, and the training could be the means through which guidance reaches those staff conducting risk assessment. The training improved the implementation of the governance for two of the three areas trained.

> *Recommendation: training is provided for all those involved in the Risk Register process.*

The 2007 Risk Register accountability structures suggest that training should be provided for the PCT and nominated as risk owners as a starting point.

These recommendations aim to improve the implementation of the Risk Management system, to embed controls into local ways of working. They also highlight a number of barriers to implementation and suggest possible approaches to reduce them.

Appendix 11: Recommendations for the Regulator

A11.1 Introduction

In 2001, HEFCE stated that the underlying principles of the Turnbull Report (ICAEW, 1999) had been accepted by HEFCE and the HE sector, and in their Accounts Direction (HEFCE Circular Letter 24/00), set a timetable for the implementation of risk guidance (HEFCE, 2001) adopting an ERM model that had been developed in the private sector. Against this backdrop, in order to improve their risk management strategy, a long-established UK university funded a three-year PhD study that commenced in 2004. Consequently, unusually privileged access to members of the organisation and to documents was granted. This summary report provides an overview of the research methods used and outlines the key findings of the study, which provide the evidence used to identify recommendations to the regulator that follow.

The organisation under study is a research-led University, and based on the narrative accounts gathered, was considered by HEFCE to have compliant risk management practices. The research aimed to describe, compare and analyse risk interpretation in different groups within this single institution and to critically examine and understand the influences that shaped them. In order to provide an analysis of risk from the participants' perspective, the findings draw on narrative accounts of risk management practice in the higher education sector, three to five years into the implementation of HEFCE risk management governance.

The introduction of HEFCE risk management governance led to a 'Risk Management Policy' and the production of a 'Corporate Key Risks' document (risk register)[23]. The register ranks the major risks to the organisation by integrating local risk registers and forms an important source of data for comparison with interview and training narratives. The methods used to gather the research participants' descriptions of risk are outlined in the following section.

[23] It is interesting to note that the term 'risk register' does not appear in HEFCE's 2001 guidance yet their production has been a common response throughout the sector. The research participants interpreted adherence to common methods as a means to reduce the risk of non-compliance with 'best practice' guidelines.

A11.2 Research Methods

The researcher gathered narrative data from interviews and risk management training workshops, over a period of 3 years. The sample included recorded interviews with 20 of the 21 Heads of Schools and Departments (one chose not to participate). This first stage: interviews with senior managers in the organisation, led to a training stage with members of staff selected by local managers and the choice of attendees provided further data in relation to interpretation of responsibility for risk. Three embedded cases, selected purposively, from widely differing groups in the organisation, provided the opportunity to deliver risk management training and to arrange 12 follow-up interviews. The training sessions included workshops in which participants identified and assessed risks. This talk about risk in the organisation was filmed and audio recorded. The interview and workshop recordings were used to provide transcripts for content analysis, using a theoretical framework derived from Luhmann's Social Systems Theory (1995) to analyse risk meanings.

The study embraced a constructivist approach, from the perspective of the different participants, multiple and conflicting views were accepted as valid. This in-depth narrative source opens the possibility to make a more detailed examination of the implementation of risk governance than has tended to occur previously, making a significant contribution to an area that has been little researched, and the key findings are outlined in the following section.

A11.3 Key findings

The purpose of risk management is to improve organisational ability to achieve aims and this is set in the context of a mirrored desire on the HEFCE's behalf to achieve their own objectives. The satisfaction of organisational aims is something that organisations do, and have been doing, long before the implementation of formal risk management. Such everyday activities are not recognised as risk management. The majority of risk mitigation that was evident, during the period of study, was set within existing practices, and no formal assessment was required to identify a need for change to satisfy evolving aims and target measures. The omission of competition as a factor in the identification of risk fails to recognise an organisational inability to satisfy divergent

aims or to balance one aim against another. The informal management of risk is placed under tension by internal forces. The image of the organisation being monitored is one of 'good practice', as targets and measures are achieved, funding is accessed, but the aims of the regulator are given significantly different priorities, those that do not impact on funding levels can be safely ignored.

This study reveals how a shift in the meaning of risk in organisations, from a calculated probability of harmful events, towards less measurable threats associated with the achievement of aims, brings all management control systems within the risk management framework. However, this shift has a potentially dangerous aspect as organisations attempt to manage uncertainty rather than risk, to portray an illusion of control. Two major concerns are evident. Firstly, the formal process was interpreted as an administrative role: form-filling, while the inability to provide useful risk assessment outputs undermined the process's value. The risk of non-compliance with regulatory requirements was reduced, and participants viewed this as the risk register's main purpose. Secondly, as transparency measures form an increasingly familiar part of organisational control, existing management controls responded to enhance success in achieving targets, but not necessarily by improving the outcomes that the measures were intended to assess. The following section provides recommendations based on these findings, and are grouped within the two categories outlined above. Firstly, formal HEFCE risk management governance and secondly, informal risk management systems.

A11.4 Recommendations to improve the embeddedness of HEFCE risk governance framework

The recommendations in this section provide suggestions to overcome identified barriers to implementation of the HEFCE risk management guidance. It provides a critical evaluation of the recommended framework, illustrating difficulties encountered by participants during risk identification and assessment activities, while also highlighting areas of non-compliance with the guidance. Furthermore, improvements in compliance monitoring to assess the effectiveness of risk management implementation are included in this section.

4.1 Problematic nature of operational risk assessment

The study reveals that the majority of identified risks related to decisions made by others, both internal and external to the organisation. Most surprisingly, 19 of 20 participants from 3 different groups in the organisation were unwilling to assign any rating during workshop sessions, despite encouragement to do so. The inability to perform a calculation to provide a 'Value at Risk' or other comparable measure reduced the value of the risk register, since participants were unable to provide outputs that facilitate risk prioritisation.

> *Recommendation: reduce the emphasis on formal risk assessment process for risks that are not amenable to statistical analysis.*

4.2 Assessment of opportunities

Risk assessment training workshops revealed that it was difficult to include opportunities using the recommended assessment grid. The risk assessment framework had a single scale, derived from safety frameworks, with no potential positive outcomes to consider. Since the guidance recommends reducing risk ratings, the rating grid implies to some participants that it is safest to do nothing.

Furthermore, interviews and workshops revealed only one group that clearly embraced the notion of risk as opportunity, as defined by HEFCE, linked to experience of positive outcomes in strategically focussed mergers. Other participants focussed on negative aspects (e.g, RAE failure, RAE impact on teaching quality, Health & Safety incidents, reduction in funding) and characterised risk as a threat. However, one additional example was evident in a risk register containing an example of an opportunity framed in a negative way, such that failure to grasp a potential benefit provided the risk rating, enabling the grid to be utilised. If this is the intended use of the framework, then this should be clear in the HEFCE guidance.

> *Recommendation: make explicit how the recommended assessment grid can be utilised for the assessment of opportunities.*

In addition, there is asymmetry between the HEFCE definition of risk, stating possible positive and negative outcomes in relation to objectives, whereas the control or mitigating actions definition only reflects reduction of unwanted

events, a more negative interpretation of risk. In the context of opportunities, chances of a successful outcome need to be enhanced, not mitigated against, but perhaps with a negative framing of the opportunity, the definition has some benefit.

> *Recommendation: review the control actions definition; explain what mitigation means in the context of an opportunity.*

However, it may be better to utilise a different approach for opportunities and to consider them in relation to a scale in which increased ratings are positive. The mixing of opportunities and threats in one risk document demonstrated little benefit, and many participants overlooked opportunities completely. A separation of these two aspects of risk may encourage the more entrepreneurial interpretation of risk to form an acknowledged part of university risk management. Indeed, the study reveals that a link between the risk register process and strategic planning was only superficially established in the case study organisation, and failed to provide the recommended input to the risk process, there was little evidence of interaction between these two formal systems.

> *Recommendation: consider the benefit to be gained by focussing risk register activity on threats, while integrating strategic planning processes to replace the risk register for opportunity risk.*

4.3 Inability to define risk appetite

The study reveals that it is impossible to define a risk appetite that reflects concerns of all organisational participants because of competing and conflicting aims. Furthermore, the risk appetite of the university was not defined, resulting in a gap in the control loop of the assessment process. There was nothing for participants to compare risk ratings with, to evaluate their acceptability to the organisation.

> *Recommendation: shift emphasis from formal risk assessment towards recognition of risk management within existing work practices; no benefit can be derived from comparing values that cannot be produced against an appetite that cannot be defined.*

4.4 Who should be involved?

Despite the HEFCE recommendation to include a wide range of staff in the process, it remains unclear who should actually be involved in the formal risk management process. Crucially the study reveals a lack of benefit to involving those without authority to act. One group suggested a way of integrating formal risk reporting with a pyramidal approach in which senior managers provide input that includes risks from the perspective of their group, enabling the views of those lower in the hierarchy to be integrated without their formal involvement, and there may be a benefit to taking this approach.

> *Recommendation: limit involvement with the formal risk register process to those in senior roles.*

4.5 Confidentiality of risk reporting

The findings suggest that difficulties arise in relation to confidentiality of risk documents when a wide range of staff are invited to contribute to the process. Staff stated an unwillingness to participate if they were not to see the outcomes of the process (i.e., the corporate risk register). At the same time, staff in another group were vociferous about unwillingness to disclose potential risks if the register was widely available; competitors could gain awareness of potential weaknesses. This further reinforces the suggestion of limiting direct involvement with risk registers to senior staff.

> *Recommendation: make confidentiality of risk registers clear, with a defined distribution.*

4.6 The Role of the Risk Register

The findings are unequivocal in explaining the purpose of the risk register from the perspective of participants: it fulfils a compliance role. Despite lack of utility in other regards, it is important to note that the register is perceived to reduce risk to the organisation, by fulfilling regulatory transparency requests.

> *Recommendation: state that if a risk register has no utility other than as a compliance tool, organisations may choose not to produce one.*

Most importantly, the study highlights a disconnection between the register and the management of risks. Risk mitigation that was evident in organisational change was unrelated to risk register content, and not recognised as risk management, such that the register provided little information about how risk

was actually being managed in the university. The study raises questions about the value of the method adopted for compliance with HEFCE risk management governance. Whilst risk registers may be easy to audit, they tell the regulator very little about the management of risks in the university.

> *Recommendation: increase emphasis on recognition of risk management activities within existing practices.*

4.7 Interpretation of risk in the formal risk management system

This case study reveals that 'risk' is most frequently interpreted to mean Health & Safety risk. This has traditionally been an administrative task, in some cases undertaken by experts, but most importantly, not senior academic managers. In consequence, the study reveals that academics were unwilling to take responsibility for risk management, since it was something they knew nothing about. However, the study illustrates their active involvement in much of the risk management that was evident. The post-training interviews revealed a reduction in their unwillingness to be involved once they became aware of undertaking risk management within existing roles.

> *Recommendation: provide day-to-day examples of existing university control processes, describe them as 'Risk Management' and thereby demonstrate the involvement of academic staff in such activities (e.g., student progression, course validation, RAE/REF preparation).*

4.8 Feedback to local register participants

The study found a failure in the implementation of the model, since there was no feedback to those providing input to the local registers. Consequently, the register's utility was undermined, such that once it had been produced it was put in a filing cabinet until required for input the following year. Most significantly, checking for the presence of a risk register will not reveal this compliance failure.

> *Recommendation: Compliance checks should include evidence of feedback to senior management in each area, in response to submission of local risk registers.*

A11.5 Recommendations in relation to existing management control systems that act to reduce operational risk

The findings reveal an organisation with an active and effective risk management system, but one that does not rely on the assessment of frequency or severity to prioritise and direct mitigation and control activities.

5.1 Interpretation of risk in the existing management systems

Unfortunately, the emphasis on assessment led to confusion with Health & Safety risk processes and existing management practices were not recognised as 'risk management' by study participants. This had a deleterious impact on the linkage between the formal risk management framework and existing controls, seriously undermining the implementation of risk management best practice as an integrated control system.

> *Recommendation: as a minimum, risk management training for designated risk owners is mandated, and forms part of compliance checks, to enable participants to recognise existing practices as risk management, opening the possibility of an integrated approach.*

5.2 Conflicting perspectives

The findings strongly support the idea that organisational risk identification reveals conflicting views about which risks should be prioritised for mitigation, such that a unitary representation of the greatest risks to the university cannot reflect the complexity of the organisational landscape. This was especially the case where the university had funding links to external organisations with different aims to those of HEFCE, such as the NHS, who were more concerned with patient care statistics than educational aims. Furthermore, applied research funded by Health Organisations did not fare well in the RAE assessment against more theoretical research, published in peer review journals. This resulted in a difficult juggling act for those who managed or were research active in these areas, the perspectives were in conflict and could not be reconciled.

> *Recommendation: recognise the role of university management in establishing a balance between conflicting perspectives. Communication between the regulator and the regulated needs to consider ways of*

reducing evident conflicts, while accepting that risk mitigation cannot reduce risks from the perspective of all interested parties.

5.3 Competing aims

Utilising the HEFCE definition of risk as enhancing the achievement of organisational aims, it is important to recognise that risk management will always be happening, it is what people in organisations do as part of existing practice. Perhaps the most significant finding of the study is the importance of recognising how study participants identify regulatory aims and associated measures as risks to the organisation. Crucially, universities have to balance the competition inherent in HEFCE aims. For example, the study reveals how the emphasis on RAE outcomes, with associated prestige and financial rewards, gives pre-eminence to research over teaching activities, which have no link to excellence for access to funding, other than pseudo-market league-tables that influence student choice of institution, since funding is linked directly to student numbers. Furthermore, the findings reveal how the importance of RAE outcomes undermined the HEFCE aim of contribution to society, through the emphasis on peer-reviewed journal publications.

The findings reveal the impact of measurement and assessment measures on the identification and mitigation of risk, albeit in existing management forums, rather than formal risk assessment exercises. One interesting example relates to the Economic & Social Research Council requirement for 4-year PhD completion. The University had introduced new review mechanisms and support infrastructure for PhD students, to achieve a very successful 92% completion rate. Several study participants saw these changes in a favourable light. However, there were others who were aware that in some cases this had undermined the long-standing aim of academic excellence, since external examination activities suggested a decline in the standard of theses being examined. Hitting the target became the overriding organisational objective.

The findings illustrate how HEFCE aims and governance requirements compete for access to resources (e.g., Teaching Excellence and Research Excellence; Pay & Modernisation and Risk Management) with some being ignored, while others

were satisfied through administrative compliance reports, and yet others triggered organisational change to meet the aims that promised the most lucrative incentives. The study revealed that it was not dysfunctional for Universities to direct attention towards targets and measures that were perceived to offer the greatest financial gains. Rather, it illustrated risk management in action. Monitoring and funding structures give more emphasis to some aims than others. Is this the intention?

Recommendation: review HEFCE aims, acknowledge areas of conflict between them and evaluate the impact of assessment measures adopted in relation to funding.

A11.6 Conclusions

These recommendations aim to offer intelligent challenge to regulatory demands for risk management, through a detailed understanding of practices in one University in the UK. The findings reveal that the private sector governance can be utilised within the public sector, with a shift in emphasis from profit to organisational aims in both contexts. Consequently, many of the recommendations above are also of interest to private sector organisations, whose operational risks will also be subject to calculative difficulties, conflicting perspectives and competing aims. However, one significant difference is highlighted, the reliance of the HE sector on HEFCE for access to funds places heavy emphasis on regulatory aims as a source of risk to universities, as existing management controls act to enhance favourable outcomes. Therefore, it is crucial that public sector regulatory bodies are aware of the impact of the measures and assessment methods, used to prioritise access to funds, on organisational practices. What may initially appear an irrational response to regulatory demands can be interpreted as rational, once understood as risk reduction by those being regulated.

This report represents an opportunity for HEFCE to enhance the recommended private sector model, and demonstrate that the HE sector can provide ideas that may be of benefit to the private sector, in which risk management implementation continues to fail to provide the protection against unwanted outcomes that the model aims to provide. These recommendations aim to foster an academic engagement with the regulator, and by providing an in-depth analysis, to facilitate the development of the risk governance framework, in the hope of offering improved outcomes for both the regulator and the sector as a whole.