Evidencing Multiple Risk Cultures: Application of neo-Durkheimian Institutional Theory to a UK Financial Services organisation

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Abstract

Since the financial crisis of 2007-2008, risk culture in the Financial Services (FS) industry has been a major focus for governments, professional bodies and FS regulators, due to the excessive risk-taking that led up to the event. Whilst there is considerable pressure for FS firms to maintain a positive risk culture, there is no established accepted definition of risk culture or a method for measuring it. Furthermore, academic research into risk culture in FS firms is sparse given the relative importance of this topic.

This study turns to the work of anthropologist Mary Douglas, known as Neo-Durkheimian Institutional Theory (NDIT), to analyse risk culture. However, applications of NDIT to study organisational culture in the FS industry have been limited. This study employs mixed methods and is the largest NDIT study into risk culture in FS firms to date, taking place in a FTSE30 Insurer with 15,000 UK employees.

The FS regulators and professional bodies assume that organisations possess a single monolithic risk culture, which can be evolved through management intervention. However, the study findings reveal that, as NDIT predicts, multiple risk cultures exist in the UK Insurer. There is evidence that multiple risk cultures have practical implications for risk policy-setting, risk communication and risk decision-making. It is also argued that the Enterprise-wide Risk Management (ERM) frameworks used throughout the FS sector appeal to just one type of risk culture which might limit their effectiveness across FS firms.

By critically comparing research methodologies typically used for NDIT studies, this study argues in favour of a mixed method approach combining quantitative survey instrument with qualitative feedback. A further contribution made to NDIT theory is the refinement of key NDIT concepts as applied to analysis of risk culture, including arguing that the Douglasian concepts of classification and ritual are central to risk management activities.

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Author's Declaration

I declare that this thesis is a presentation of original work and I am the sole author. This work has not previously been presented for an award at this, or any other, University. All sources are acknowledged as References.

Martha Phillips

CHAPTER 1: INTRODUCTION

1.1 Research Background

The current levels of economic, political, societal and environmental uncertainty underline that effective management of risk is critical for businesses, economies and wider society. In response, corporate organisations are trying to keep pace with evolving threats such as market volatility, technological instability and access to natural resources, whilst governments worldwide are mobilising to address complex systemic risks such as global warming. No area of life is immune to multitudes of potential risks. The 2021 World Economic Forum Global Risks Report describes clear and present dangers including societal / generational divisions, digital reliance and inequality, human-led environmental damage, and cyber security failure (World Economic Forum, 2021, p.4). Additionally, the Covid-19 pandemic has also shown that crystallisation of low probability / high impact risks can transform the risk landscape and our way of life within a matter of weeks. The ever-changing risk landscape can be illustrated by the acronym 'VUCA', which stands for 'Volatile, Uncertain, Complex and Ambiguous'. It has in recent years been used by political and corporate leaders to describe the world as it is today, and to address unique challenges of leading in this unsteady environment (Sarkar, 2016; George, 2017).

Addressing such wide-ranging, complex and systemic risks is challenging and multiple approaches to risk management have arisen. For example, actuarial science, operational risk management, cyber risk management, continuity management and operational resilience. The Covid-19 challenge has also presented opportunities to evolve risk management approaches through institutional coordination, risk financing and improved information collection and sharing (World Economic Forum, 2021,p.9).

The ability to manage risk in a corporate setting is regarded as an essential part of good governance, and within the financial sector, a condition of the license to trade. As detailed in The UK Corporate Governance Code, Directors are required to "… establish procedures to manage risk, oversee the internal control framework, and determine the nature and extent of the principal risks the company is willing to take in order to achieve its long-term strategic objectives." (FRC, 2018, pg.10). To assist corporations in establishing good governance, standardised risk management frameworks have been developed and published by ISO (31000 Enterprise Risk Management Framework), industry bodies such as AIRMIC (the Association of Insurance and Risk Managers in Industry and Commerce) and the UK government (The Orange Book).

However, it is widely recognised that successful management of risk requires more than just robust frameworks and procedures. Risk frameworks must be implemented in a proportionate and coherent way and used to inform risk decision-making, rather than adopted as a 'tick-box exercise' to appease stakeholders and regulators. Additionally, leaders must be considered in their decisions and actions, both in the short-term and long-term, and set an appropriate tone for the rest of the organisation to follow. For these reasons, discussions on 'culture' in the business arena have become increasingly prominent. The cultural response to risk can be conceived as how individuals perceive risk, approach decision-making, and are influenced by social dynamics, protocols and expectations. A particular interest in the role of culture in managing risk emerged following the 2008 financial crisis, which is explored further in the next section. Since then, corporate governance codes of practice have incorporated 'culture' as a key facet of robust governance. For example, the ISO:31000 standard published in 2009 stipulated 'Management should ensure that the organization's culture and risk management policy are aligned' (section 4.2); the Financial Reporting Council (FRC)'s 2011 Developments in Corporate Governance Code publication stated: 'The issues with which companies were grappling include understanding their exposure to risk and how this might change…[and] embedding the right risk culture throughout the company…'(FRC, 2011, pg.14). The 2018 UK Corporate Governance Code was updated with '…a company's culture should promote integrity and openness, value diversity and be responsive to the views of shareholders and wider stakeholders.' (FRC, 2018, pg.1). The intention of formally incorporating culture as a corporate governance requirement is to avoid 'box-ticking' and ensure risk management frameworks are supported by behaviours that sustain rather than undermine the success of the organisation. Although the importance of culture in the context of risk management is acknowledged, the concept of risk culture is underdeveloped and there is very limited existing research investigating risk culture in organisations, as explained in section 1.3. Therefore, the focus of the thesis is to address this research gap and investigate risk culture within the context of a UK financial services (FS) organisation. Risk is fundamental to the FS industry and the importance of risk culture for the FS industry is explained in the next section.

1.2 The importance of Risk Culture for the Financial Services Industry

Financial Services (FS), encompassing Insurance, Investments and Retirement products, is a risk-based industry whose profitability relies on accurately predicting and managing operational, economic and demographic variables. The Financial Services industry has received significant attention since the 2008 financial crisis due to its failure to manage levels of risk exposure in the preceding years. What started in 2007 as an issue in the US sub-prime market quickly spread and led to the failure or government bailout of multiple FS institutions in the US and the UK, including Lehman Brothers and Northern Rock. The

cause was failure to predict or curtail the impacts of credit defaults and liquidity issues. The total cost to US economic output is estimated at $20 trillion (Moyo, 2021, p.5) Poor risk culture was identified as a root cause by the both UK and US governments for systemic failures in prudent control and decision-making to predict and avoid these losses. This is evident in subsequent inquiry and 'lessons learned' exercises performed by the UK government (Treasury Committee, 2009) and US government (Financial Crisis Inquiry Commission, 2009). The impact of risk culture on the financial crisis is well summarised by Chuck Prince, ex-Citibank CEO, who allowed the bank to take excessive trading risks despite severe liquidity issues: 'As long as the music is playing, you've got to get up and dance' (Kemper, 2015).

The failures of UK banks and subsequent bailouts led to the publication of the Walker Review in 2009, an independent assessment of corporate governance failures across UK banks and other financial institutions. It concluded that robust corporate governance depends on the behaviours of individuals, not process, and provided recommendations for moderating behaviour by strengthening oversight of management. However, since the 2007/2008 financial crisis examples of poor conduct in financial services firms continue to be reported – for example widespread PPI mis-selling from 2011 onwards, LIBOR rate-rigging at Barclays in 2012, and rogue-trading at UBS in 2015. Each of these are considered a failure of risk culture. Despite an apparent assumption that culture can be achieved via oversight and prescription, it is also acknowledged by the UK Regulators (FCA and PRA) that increasing compliance requirements and fines have not removed the problem (Davidson, 2018, p.9). As a result, regulators continue to scrutinise the culture of FS firms, paying close attention to governance frameworks, leadership action and remuneration. For example, Andrew Bailey, former Deputy Governor of the UK's Prudential Regulation Authority (PRA) has stated:

> My assessment of recent history is that there has not been a case of a major prudential or conduct failing in a firm which did not have among its root causes a failure of culture as manifested in governance, remuneration, risk management or tone from the top. (Bailey et al., 2016)

In response, the UK government, regulators, industry professional bodies and FS organisations continue to review and update policies and guidance for managing culture. Recent examples are the Parliamentary Commission on Banking Standards report *Changing Banking for the Good* (2013), the Financial Reporting Council's (FRC) 2016 report *Corporate Culture and the role of the Board* and the Risk Coalition's 2019 report *Raising the Bar*. Most recently, a tender was released by the FRC in 2021 that asks for bidders to investigate and deploy techniques for Boards to manage culture. Considerable

attention has been focused on risk culture since the financial crisis and this has not diminished subsequently.

1.3 Defining Risk Culture: Research Gap

Whilst risk culture is considered a critical pillar for robust corporate governance following the financial crisis, the FS industry, its regulators and academic research are unclear on how risk culture should be defined and understood. This section illustrates this further and provides a foundation for further research on risk culture in FS.

Despite its importance to the stability of the financial services industry, industry bodies and FS regulators have only produced a loose definition of risk culture. For example, the Institute of Risk Management (IRM) ventures that risk culture is a term '…describing the values, beliefs, knowledge and understanding about risk shared by a group of people with a common purpose..' and that culture emanates from the behaviour and attitudes of individuals (Anderson, 2012). Risk culture is therefore cultivated by the individuals in charge and their predisposition towards risk taking but is also propelled by group behaviours. However, the detail of how this manifests is vague. The IRM then advocates a diagnostic model for Boards to benchmark specific criteria including maturity of governance frameworks, transparency of information and capabilities.

The UK FS Regulator – PRA (Prudential Regulatory Authority) and FCA (Financial Conduct Authority) discuss firm 'culture' more generally. The PRA has stated that culture is not something that has a tangible form:

> As supervisors, we cannot go into a firm and say, "show us your culture". But we can, and do, tackle firms on all the elements that contribute to defining culture, and from that we build a picture of the culture and its determinants (Bailey *et al.*, 2016).

An additional discussion paper was issued in 2020 by the UK FS Regulator, the FCA (Financial Conduct Authority) that again emphasises it will not stipulate what a desirable culture is:
'We have always been clear that we aren't going to prescribe a one-size-fits-all culture for the industry. With more than 59,000 firms at last count, the population of firms we regulate is diverse, and their cultures should also be.*'* (FCA, 2020)

Rather than guidance, the FCA publication on culture presents a selection of 'sector specific essays' and expert opinions on what the ideal culture could be and how to achieve it. This publication signposts the principles of 'purpose' (what the firm is trying to achieve) and 'psychological safety' (the freedom to express an opinion and be listened to) as key concepts underpinning a desirable culture (Davidson, 2020, p.4). The FCA approaches supervision of firms through four key drivers of behaviour that they believe can lead to unmitigated risk if not managed – purpose, leadership, approach to managing and rewarding people, and governance (FCA, 2015).

It appears therefore that the FS Regulator conceives of culture within firms in terms of negative or positive 'indicators' - for example the extent to which bad news is sought or ignored, whether there is a structured governance framework, whether people have a shared purpose, whether people are rewarded for sustainable action rather than short-term gain. Such an approach could be helpful for monitoring and oversight - it gives firms and the Regulator opportunity to prevent poor outcomes whilst allowing a firm latitude in how they operate. However, this approach focuses only on tangible manifestations of risk culture and does not explain how cultural forces in the organisation operate and align to produce such outcomes. There also appears to be an inherent assumption that additional oversight and monitoring of outcomes will be effective in creating appropriate behaviour towards risk.

Additionally, both industry bodies and the FS Regulator assume that a single monolithic risk culture is both desirable and achievable. This assumption is linked to the idea that Executives and Boards can dictate risk culture through a consistent 'tone from the top', and then hold responsibility for embedding it throughout the organisation. Creating the 'wrong' risk culture presents high stakes for individual executives across the FS industry due to potential penalties for conduct breaches. Steps have been taken in recent years to increase the level and visibility of individual accountability for executives via the Senior Managers and Certification Regime (SMCR), launched by the UK Regulator in 2016. Under SMCR, executives are expected to lead from the top and bear responsibility for the risk culture across their business or function. Therefore, developing an understanding of how risk culture is created, manifests and the degree to which it can be influenced, is critical for both firms and the individuals that are accountable for them.

There has been considerable academic research into the nature of organisational culture. Damasio (2005, 2019) argues that culture is rooted in neurobiology, and the inherent biological motivations of humans to survive, whilst navigating their circumstances and emotions. As part of research into organisational effectiveness, Quinn and Rohrbach (1983) developed the Competing Values Framework, highlighting that

three value dimensions exist within organisations that underpin leadership styles, that can create multiple and conflicting priorities. The CVF has been used to understand organisational behaviour, and diagnose and evaluate culture (Cameron and Quinn, 2006). Within the social sciences, Meyerson & Martin (1987) and Martin (1993, 2001) contrasts three perspectives on organisational culture– Integration: organisational culture is that which people share, Differentiation: organisational culture is the existence of subcultures, inconsistences and conflict, and Fragmentation: organisational culture is inherently imbued with ambiguity, paradoxes and unknowns. Martin argues that when an organisation is viewed from all three perspectives, a greater understanding emerges than if it were viewed from a single perspective (Martin, 1993). Martin's work is a meta-theory that investigates organisations using each of the three perspectives, exploring assumptions and contradictions between each, and does not attempt to define culture within a model of cause and effect. More significantly, it does not opine on the role of organisational culture in its response to risks and risk-taking. However, Martin does challenge the notions of 'strong' organisational culture as one that is harmonious and aligned to the values and beliefs of top executives, and therefore is cognisant and embracing of cultures that are divided, contradictory and in conflict, which is contrary to the expectations of FS Regulators. Research on organisational safety, such as Turner (1978) and Pidgeon (1998), has explored the concept of safety culture, defining it as a 'shared attitude of care for the consequences of their actions…' (Turner & Pidgeon, 1989, p.6), and a constructed system of meaning (or shared understanding) through which the hazards of the world are understood (Pidgeon, 1998). Pidgeon & O'Leary (2000) explore characteristics of 'high reliability' organisations, the relationship between organisational culture and technological failure, and assess common barriers to learning from disasters. However, safety culture is focused solely on the avoidance of harm and operational hazards, and does not consider the full range of risks facing organisations (such as strategic or financial risk), or risks where perspectives vary depending on social and cultural factors (such as environmental risk). Study into risk culture in organisations must utilise a framework that encompasses all types of potential risk facing organisations, and can account for (at least to a degree) individual and social biases that influence perception of risk.

Notwithstanding such examples of academic research into organisational culture and safety culture, academic research on risk culture – the focus of this thesis - is comparatively sparse nor has it attempted to outline and stratify its potential determinants. Analysis on the nature of risk culture tends towards articulating cultural 'indicators' described above. Bozeman and Kingsley (1998) is the first paper that attempts to define risk culture, concluding that is it the '*propensity to take risks'* (Bozeman and Kingsley, 1998; p.111). The authors investigate whether this varies across public and private sector organisations. However, the potential determinants of risk culture outlined in the paper are limited, and include the

extent of internal control procedures, level of formality, reward expectations and clarity of goals. Furthermore their survey data is based on managerial perception of these factors which main contain bias. Simons (1999) proposes a series of 'pressure points' which, when combined, could result in poor decision-making and unmitigated risk. Examples of these pressure points are rapid growth, inexperience of key employees, executive resistance to bad news, and decentralised decision-making. Both studies provide plausible explanations of how risk culture is created and sustained. However, both studies focus on the avoidance of loss or 'warning signs' that might precipitate failure or a crisis, rather than identifying the qualitative components of risk culture. They also continue the assumption that organisations have a singular monolithic risk culture.

Other academic research has more direct focus on investigating risk culture within the FS industry. Power, Ashby and Palermo (2013) present the multiple human and cultural factors leading to the financial crisis, and what sort of practical interventions from CEO's, CRO's and advisers might be appropriate to avoid crisis. Importantly, this work also recognises the tension between practice-based understandings of risk culture – ones that pursue diagnostics, intervention tools, and management actions – and academic viewpoints that reflect the complexity of both risk and culture (Power, Ashby and Palermo, 2013). It is also recognised that conceptualising and responding to risk culture within an organisation is not in itself a culture-neutral activity –an important point when considering the impact of Board or Regulator-led interventions into a firm's culture. However, this study is limited as it does not conclude on a particular set of causal explanations for culture or method of measuring it.

More recently, *Beyond Bad Apples* edited Tuveson et al (2020) provides an overview of risk culture in business, that like Powers et al. (2013) provides multidisciplinary perspectives on risk culture across UK businesses from thought leaders and academics. Specific chapters on the FS industry include Needham & Hotson, who detail the measures taken during the 20th century to deregulate banking lending and argue for the political origins of liquidity and credit crises. Additionally, Alexander debates the relationship between individual agency and concludes that the task of regulating collective activities of many individuals is complex, and could be managed more effectively by balancing official sector regulation and self-regulatory initiatives that build on existing institutional knowledge in the financial sector (Tuveson, Ralph and Alexander, 2020). Overall, this work emphasises the need for an institutional approach to understanding risk culture, explicitly rejecting the notion that individual agents ('bad apples') are responsible for organisational failure. However, it does not submit an authoritative definition of risk culture, nor does it provide insights into how to manage and measure risk culture. Furthermore, the conclusion acknowledges that '*academic studies have not yet yielded the proof that risk culture exists as*

an entity' (Tuveson, Ralph and Alexander, 2020, pg. 271) which further illustrates there is a paucity of academic research into risk culture and a disconnect between academic analyses of risk culture and industry and regulatory conceptions of risk culture.

Risk culture also features in the work of Mikes (2009, 2011). Mikes' studies examine the operationalisation of ERM (Enterprise Risk Management) in banking institutions and how this manifests different cultures. Mikes work (2009) presents evidence for two types of cultures. The first is 'quantitative enthusiasts', which is a culture informed by risk calculations in informing strategic decisions. The second is 'holistic ERM' which relies on negotiation of limits and a greater focus on internal control. This portrayal of competing ERM approaches is expanded in Mikes (2011) where it is argued that risk officers engage in 'boundary-work' (demarcations between fields, knowledge and role); this could be interpreted as emergence of different cultural perspectives across a homogenous professional group. Mikes' work reflects that for some researchers, understanding risk culture is inextricably linked to how the evolving disciplines of risk management are adopted and operate across an organisation. The studies by Power et al, (2013) and Mikes (2009, 2011) both contribute additional perspectives on how the notion of risk culture could manifest and be monitored within FS. However, questions remain on the fundamental determinants of risk culture, its qualitative elements, whether a transferable model for stratifying and understanding culture is possible, and how to account for the presence of different sub-cultures or different perspectives within an organisation.

Finally, Neo-Durkheimian Institutional Theory (NDIT) has been utilised by a small group of researchers and practitioners to understand risk culture within organisations. Work by Underwood, Thompson, and Ingram (2014) and Thompson (2016) use NDIT to stratify and describe risk cultures (rather than a single culture) within banks and insurers. These studies are limited in their scope, focusing on the executive level, and predominantly assess attitudes towards risks associated with credit and insurance risk, rather than operational or strategic risk. Whilst they present compelling theoretical portrayals of risk culture the underlying methodology for discerning these is less apparent. Nevertheless, examining risk culture using NDIT provides the researchers with distinct advantages – an articulation on the determinants of risk culture and how to understand cultural responses to risk that do not align to prescribed expectations.

To summarise, whilst there has been extensive academic research into organisational culture, research into risk culture within organisations is comparatively limited. Risk culture research to date aims to articulate how risk cultures manifest, and to a much more limited extent, the determinants and forces that shape culture. However, there are clear limitations in existing risk culture research, and this comprises a

research gap. Specifically, none of the existing studies draw on a theoretical framework despite there being theories which might productively assist in better understanding risk culture. As highlighted above, one such framework to achieve this is NDIT, and the basis for turning to NDIT to understand risk culture is explored further in the following section.

1.4 Understanding Risk Culture using Neo-Durkheimian Institutional Theory

Neo-Durkheimian Institutional Theory (hereafter shortened to NDIT) was developed by anthropologist Mary Douglas, and is orientated in the work of sociologist Emile Durkheim. It has continuously evolved since the 1960's, including by political and social scientists such as Aaron Wildavsky, Michael Thompson and Karl Dake, and is often referred to as the Cultural Theory of Risk. NDIT has the potential to offer a nuanced understanding of risk culture, and has been used extensively across public and private domains to explain interaction within groups and resultant decision-making. For example, the theory has been used to examine government decision-making (6, 2011), gun control debates (Kahan, 2003), to stratify culture across educational settings (Harris, 1995), to develop an anthropology of workplace crime (Mars, 2019) and analyse failures in auditing practice (Linsley and Shrives, 2009; 2014). It is therefore highly transferable to different contexts.

NDIT, which is explained and discussed in detail in chapter 2, has several advantages for the analysis of risk culture in FS firms. Firstly, NDIT proposes two organisational dynamics (Group and Grid) that align culture into a functionalist model based on social interactions. Understanding the social dynamics underpinning culture can explain how individuals within an organisation may defer to a common way of thinking about risk. NDIT also asserts that although organisations may have a dominant risk culture, there will be more than one risk culture (or 'worldview') present in any organisation with the theory holding that there will be a minimum of four thought-styles. If the theory is accurate, this has important implications for the concept of risk culture and in particular the assumption across the FS industry that there should be one monolithic desirable risk culture. Additionally, the theory can account for changes in culture over time as it does not assume culture is set and then remains static. This is because the dominant culture at any one point in time can be shaped and usurped by competing cultural forces. Therefore, NDIT conflicts with perspectives outlined by academic research and the FRC and UK FS Regulators which is that there can be one risk culture that senior executives decide upon and proceed to manifest, through setting the right 'tone from the top'. Therefore, Douglas' theory could be potentially significant for the FS Regulators, professional bodies and academic researchers as they attempt to define and manage risk culture.

NDIT also helps to explain why attitudes towards risk could become polarised within FS firms and their stakeholder groups, and why conflict then becomes inevitable as different cultural groups tackle decisions and problems from fundamentally different perspectives. This is because NDIT asserts that different risk cultures will approach the management of risk differently and attune their management responses accordingly. Again, this may be critical for understanding why different perspectives towards the same risks emerge within organisations. The theory does not provide a simplistic diagnostic for determining and managing risk culture, but may provide an explanatory framework for understanding risk culture whilst revealing its complexities.

It is important to note that Douglas' ideas are still subject to further development and research continues to refine Neo-Durkheimian Institutional Theory/Cultural Theory of Risk and to understand how best to apply it in researching organisational risk culture. The methods for conducting NDIT-based research have evolved alongside the theory itself, and researchers often select research methods to meet the study aims, depending on how the theory is being used. Creating a robust methodology to apply Douglasian principles to topics such as risk culture is an ongoing challenge and a source of debate, as outlined above with reference to Underwood et al.'s (2014) study within FS. Whilst NDIT may provide an explanatory framework for understanding risk attitudes, there are differences of opinion on how to determine them. Central to most NDIT studies is the identification of 'thought-styles' to understand the dominant cultural influences within an organisation. Distinct thought-styles are thought to be associated with distinct risk cultures. NDIT researchers typically identify thought-styles in one of four ways:

1. Asking study participants to answer questions relating to a typical characterisation of the four thought-styles is the most common approach for quantitative-oriented NDIT research.
2. Asking study participants to review typified risk attitudes associated with each of the four thought-styles and to identify the statement they most agree with, is an alternative quantitative method adopted in NDIT research.
3. Asking study participants for their perspectives on an issue and inferring their thought-style from their response is a qualitative method that can be progressed using either a survey instrument, interviews or focus groups.
4. Case study analysis where NDIT is used as an explanatory framework for past events.

Douglasian researchers choose one of these methods depending on the aims and scope of the study. Mixed method approaches are rare, however. No large-scale NDIT studies have been carried out in FS firms in the UK. This study takes place in a large FS organisation and adopts mixed method research.

Because Douglasian researchers tend to adopt just one of the research methods listed above, it cannot be known whether such studies would have reached the same conclusion had a different research method been adopted, or if further insights into the phenomenon under investigation might have arisen from selecting an alternative method(s). Hence, by employing a mixed methods approach in this study there is an opportunity to evaluate the three research methods adopted by administering them concurrently and this can highlight potential problematics of using Douglas to research risk culture in organisations. Adopting a mixed method approach by gathering both quantitative and qualitative data also enables generalised and specific insights into risk culture within a financial services organisation to be derived.

1.5 Research Aims, Objectives, and Research Questions

This research aims to address gaps in risk culture research, which is currently limited in scope, through adopting NDIT as a theoretical framework which has the potential to provide nuanced insights into risk culture. Further, it differs from prior NDIT studies by adopting a mixed method approach. The overall aim of this thesis is, therefore, to: Investigate risk culture in the Financial Services Industry through employing neo-Durkheimian Institutional Theory and adopting multiple research methods.

More specifically, the objectives of this study are to:

1. Identify risk perceptions and risk cultures within the context of financial services and to evaluate their implications for the management of risk within this context.
2. Compare the risk perceptions and risk cultures identified under the three alternative research methods and to evaluate the implications for researching NDIT.
3. Evaluate the implications of the results for how NDIT is conceived.

To achieve these objectives the research examines risk culture within a UK Insurer with 15,000 UK employees. Following the 2008 financial crisis 'too big to fail' problem, the organisation was identified by the Financial Stability Board in 2015 as one of the world's Systemically Important Financial Institutions (SIFIs) and a Globally Systemically Important Insurer (G-SII) (Fung *et al.*, 2018). This means that the organisation could have a widespread impact on the macro-economic environment should it financially or operationally fail, and is therefore subject to additional Regulatory scrutiny and loss absorption capabilities (for example, higher capital requirements). A robust and resilient risk culture is therefore imperative not only for the provision of critical financial services to its customers and the firm's own solvency, but also to support global financial stability and economic value.

The organisation provides financial services to 15.5 million UK customers and is a market leader. The firm conducts business via traditional direct and adviser-led services, and digital propositions, whilst remaining compliant against a wide range of regulations and remaining economically and operationally resilient in a volatile environment. The complexity of the organisation's objectives and operating environment are advantageous for the application of NDIT, as it may facilitate the emergence of different risk perspectives.

Therefore, this leads to the following three research questions:

- Research question 1 (knowledge contribution). What are the risk perceptions and risk cultures present in the FS firm and what are the implications of these risk perceptions and risk cultures for the management of risk within the firm and for the FS sector?
- Research question 2 (research design contribution). How do the risk perceptions and risk cultures compare under the three research methods and what are the implications for researchers employing NDIT?
- Research question 3 (theoretical contribution). What are the implications for how NDIT is conceived?

1.6 Contributions

This study contributes to the fields of risk culture and NDIT in a number of ways. It is the first NDIT study into risk culture in UK FS firms to date, taking place in a FTSE30 Insurer with 15,000 UK employees. It is also a large study involving 550 research participants. The findings reveal that, as NDIT predicts, four risk cultures coexist in the UK Insurer. This challenges assumptions commonly held by FS firms, the FS Regulator and academic and industry publications that organisations can create and maintain a single monolithic desirable risk culture. The study employs mixed methods, including a novel survey instrument. Mixed methods have not been commonly used in NDIT studies to date, and this research argues in favour of mixed method approaches in more accurately identifying risk cultures. The results of this study also enable a discussion of NDIT theory itself, specifically the nature of the underlying concepts of Group and Grid, the role of personal agency in NDIT and also challenges the supposed neutrality of each of the thought-styles. Each of these contributions are discussed in more detail below.

The results evidence the existence of multiple risk cultures (NDIT thought-styles) and this has important practical implications for risk policy-setting, risk communication and risk decision-making in the UK Insurer and the FS sector. The results also suggest that the Enterprise-wide Risk Management (ERM) frameworks which are commonly used by FS firms appeal to just one type of risk culture which might limit their effectiveness and embedment across FS firms. Both of these outcomes also have implications for how FS firms are governed and supervised, which are explored in this research. Additionally, the research gap identified earlier of limited studies on risk culture in FS firms has been addressed.

This study additionally contributes to the understanding of how to conduct NDIT research. By adopting a mixed methods approach, which is rare in NDIT research, it has been possible to critically compare research methodologies typically used in NDIT studies. The thesis argues in favour of a mixed method approach that combines a quantitative survey methodology triangulated with a qualitative approach for identifying risk cultures. The thesis also comprises a novel survey instrument that was developed by the researcher for measuring the underlying NDIT dynamics of Group and Grid, rather than the four NDIT thought-styles. Such an approach has not been deployed at scale to date, and it is argued, successfully navigates around shortcomings presented by quantitative survey instruments in previous research.

A contribution is also made to NDIT theory as the study enables the researcher to critique key NDIT concepts as they apply to the analysis of risk culture. This includes discussions on expanding the character of the four risk cultures and a review of the foundational concepts of Group and Grid. Additionally, it is argued that the Douglasian concepts of classification and ritual are central to risk management activities, thereby emphasising the role of risk management frameworks in establishing social order and control within organisations. Finally, this research makes a normative claim that a dominant culture of Hierarchism befits an organisation like the UK Insurer, due to the level of systemic risk present in a Systemically Important Financial Institution (SIFI) with its potential impact to society being significant should failure occur. Therefore, it is argued that NDIT, when applied to certain large institutions and sectors including FS firms, may need to concede that there might be an optimal cultural mix and a preferred thought-style.

1.7 Structure of the thesis

The remainder of the thesis is structured as follows. Chapter 2 comprises the literature review, focusing on the development of NDIT theory, and NDIT studies to date, including in the study of risk management. Chapter 3 evaluates the research methods used in NDIT studies to date, and details the research methodology used in this study. Chapter 4 sets out the data obtained as part of the study. Analysis and discussion of the data follows in Chapters 5, 6 and 7, each corresponding to the three research questions outlined in section 1.5. Chapter 5 analyses each of the four risk cultures identifiable from the data, and considers the impact of the results on FS firms and the FS industry, Chapter 6 evaluates the research methodology used by this study and implications for future NDIT studies. Chapter 7 discusses the implications of this study on NDIT theory, including the foundational concepts of Group and Grid, the role of agency in NDIT, and challenges the neutrality of each thought-style. Finally, Chapter 8 summarises the conclusions of this research, evaluates the implications for the FS industry and risk culture research, discusses the limitations of this study and also suggests areas for future research.

CHAPTER 2: Literature Review

NDIT is adopted as the theoretical framework in the thesis and this chapter reviews and critiques the theory. This includes reviewing how concepts which comprise NDIT have been applied to date to study risk management and risk culture. NDIT is a complex theoretical framework which has been deployed across diverse disciplines including, for example, political studies (Swedlow (2011;2014)), reviews of historical events and organisational studies. Partly because of its complexity, it is also a theory which is continuing to evolve as NDIT scholars debate different aspects of it. This means that this Literature Review takes a descriptive, analytical and critical approach, aiming to both outline and evaluate aspects of Douglasian theory. This allows for critical re-evaluation of specific elements of NDIT as part of Chapter 7.

The chapter starts by reviewing both Durkheim and Douglas' foundational ideas, then moving on to subsequent works by Douglas that have further developed and amended the theory. Sections 2.2 and 2.3 comprise a detailed analysis of the Douglasian concepts that underpin NDIT – namely classification and ritual, and the dynamics of Group (social integration) and Grid (social regulation). Section 2.4 then details how Group and Grid are thought to formulate thought-styles that in turn create distinct attitudes towards risks and present differentiated risk cultures, and section 2.5 presents the existing literature on how thought-styles interact. Section 2.6 evaluates the development of NDIT in risk management studies, and section 2.7 draws out key theoretical distinctions in the study of NDIT. Finally, section 2.8 assesses NDIT in the context of other social cognition theories, justifying its selection as a theoretical framework for this study.

As this is a study of risk culture, this chapter will also, where applicable, comment on the implications for risk management as key concepts are introduced. This includes a section on how NDIT has been conceptualised for the field of risk management and risk culture, notably via Douglas' collaboration with Wildavsky on *Risk & Culture* (1983). It is evident from the literature review that a research gap exists for further exploring the application of NDIT within organisational settings and in understanding risk culture(s). Such a study could also offer greater insights into the foundational concepts underpinning NDIT and into its usefulness in the study of risk culture.

2.1 The Theoretical Origins of NDIT

The theoretical origins of NDIT stem from a desire to scientifically analyse human social activity. Durkheim, in conjunction with other theorists such as August Comte and Herbert Spencer, set the

foundations for sociological positivism (Alexander & Smith, 2005) which can be understood as the ability to analyse, classify and utilize social activity amongst humans in order to influence practical outcomes. Sociological positivism is based on the principle of 'social facts' – testable and measurable laws of society that affect how individuals and groups operate (Outhwaite 2015). It states that individual consciousness, is influenced by, or supplemented with, a 'collective consciousness' that informs attitudes and behaviours. This means that the individual may not think or act in a way that is solely self-motivated or indeed aligned with individual preferences but draws from commonly held notions from the social setting or behaves in a way that allows participation in a social setting.

The concept of sociological positivism remains subject to debate. For example, the causes of individual and social activity may be multiple, negate each other, or originate from abstract entities or mechanisms that are not empirically present (Emirbayer 1996). A restricted or assumed understanding of causality could also prevent other helpful explanations of human events - for example, neurobiology may also have a role in explaining risk taking and risk appetites. However, the concept of social facts, and the 'collective consciousness' are key premises underpinning NDIT and are central to Douglas' work.

In the study of risk management, the notion of 'collective consciousness' is in direct conflict with the notion of 'rational choice theory' - that all individuals make objective and balanced choices utilizing all available information. As part of a 'collective consciousness', social pressures can override rational individual decision-making in respect of taking risks. One example of non-rational individual risk-taking behaviour that is influenced by social factors, is cigarette smoking, as Slovic et al. (2013) identify. This means that risk-taking may not be solely driven by rational choices by an individual. However, within the FS sector, it is assumed that accountable leaders make rational choices using available data – and this is a key premise of the Regulatory supervision of individual executives in FS firms. Such assumptions are challenged by the concept of 'collectiveness consciousness', which infers that decisions are made, at least in part, by social pressure.

In addition to concepts of social facts and collective consciousness, Durkheim, alongside Max Weber, progressed the idea of functionalism – that is, that social groups and institutions (for example, educational, military, media, religious) perform a specific role as part of a systematic 'whole', are integral, necessary and a response to each other, and cannot meaningfully exist in isolation. Further, the existence of social groups and institutions correspond to specific needs of others, as Weber articulates in the study of religion (Thompson et al. 1990). According to functionalism, there is a benefit associated with each social group in achieving social stability, and additionally it is because of such benefit that each

social force or institution exists. As such, all functions of society (even crime), play a positive role, and that deviance against normalised functional outputs equates to 'noise' in the system rather than fundamental incoherence (6, 2017). Other NDIT scholars maintain functionalism is essential to explain how social 'systems' are created in the first place, and can be maintained at all against a backdrop of inevitable change and disruption. Douglas' theories, as will be explained later, adopt functionalist explanations for the way in which social groups interact, and reinforce each other via processes of conflict and feedback. This has been reiterated by Thompson et al, who argue that the maintenance of social systems themselves is dependent on the system generating ways of behaving (Thompson et al. 1990).

It is also significant that Durkheim and Douglas refer to sociologies of religion in describing the process of institutional order. Religious order incorporates rituals as a means of maintaining social systems which, as will be explained in section 2.2, is integral to Douglas' development of the NDIT model. In *Natural Symbols* (2002), Douglas extends Durkheim's theories by arguing that analysis of religion should not focus solely on religious institutions but also seek to understand religious order as a product of wider social organisation. Therefore, whilst Douglas utilises elements of Durkheim's analysis of religion, she in parallel attempts a transferable model that is comprehensive and unbiased towards specific institutions.

Consideration should be given to why Douglas leveraged Durkheim's legacy - including functionalist and positivist perspectives – across her anthropological works. This can be explained by Douglas' aim in developing NDIT – that is, to pursue a theory of institutions that is purely sociological and not political, nor time or location-bound. A successful theory must incorporate both individual cognition and group transactions in its view of how social solidarities operate, and Douglas believed that the work of Durkheim could integrate cognitive and transactional forms of social behaviour (Douglas, 1986). However, the extent to which Douglas' NDIT framework wholly influences both social and psychological activity remains open to debate.

In addition to Durkheimian concepts of sociological positivism and functionalism, Douglas' own work introduces additional anthropological concepts to the development of NDIT. The development of NDIT is not straightforward to present, due to the interaction of ideas from Douglas and other theorists, frequent revisions, and because the theory has not emerged chronologically. With this in mind, the remainder of Chapter 2 examines foundational NDIT concepts thematically.

The next section explores how concepts of classification and ritual are presented by Durkheim and subsequently utilized and developed by Douglas in her works *Purity & Danger* (1966), *Natural Symbols*

(2002) and *How Institutions Think (1986).* The culmination of such concepts produced Douglas' elementary forms – Group (social integration) and Grid (social regulation) that underpin the NDIT model and produce thought-styles. A detailed discussion of Group and Grid will also follow.

2.2 NDIT Key Concepts: Classification & Ritual

This section reviews concepts of classification and ritual across Douglas' works. They are inherent to the later development of Group (social integration) and Grid (social regulation) in NDIT and are crucial to understanding how social order, dynamism and conflict are created.

2.2.1 Classification

Classification can be understood as a method for ordering items and actions as routine or anomalous, by placing them into categories, and defining the properties they possess. When items and actions are determined as falling within an accepted classificatory system, or deemed anomalous, this impacts behaviours towards them. Douglasian scholars maintain that classification is a product of social organisation, that simultaneously cultivates, protects and galvanises social ordering.

In Durkheim's *Elementary Forms of Religious Life* (1912), religion is presented as both an embodiment and mechanism for classification resulting in the '…division of the world into two…domains, the one containing all that is sacred, the other all that is profane' (Durkheim, 2001, pg.36). Douglas similarly describes in *Purity & Danger* the interpretation of dietary restrictions outlined in Leviticus (Douglas, 1966), and in *Natural Symbols*, Friday abstinence for the Irish (Douglas, 2002) as classificatory systems associated with religion. Systems of classification for Durkheim and Douglas encompass both practical and moral objects. However, it is noted in *Purity & Danger* (chapter 2) that boundaries set by classificatory systems exist in secular societies, and the purpose of these is to support managing-out dirt and disease. However, the purpose of classification is not solely practical, since it is clear from the variety of belief systems available that there is no primacy of one classification system over another. In addition, classificatory rules often appear arbitrary, suggesting that objective differentiation between items is not the end goal. Douglas then describes classification as way of managing social behaviours within societies and institutions, and underpin conflict, which is evidenced in political, religious and ethnic conflict and resolution throughout history. Conversely, 6 and Richards further argue that classifications extend to the maintenance of peace between and within groups, which when reinforced with ritual, maintain a sense of 'coherence and purposefulness.' (6 2017, p189). For example, 6 and Richards (2017) provide an example of arbitration between different religious practices in 17th century

Netherlands.

In addition to sustaining social coherence and control, classification supports cognitive short-cuts for individuals and social groups to assign significance to and understand items in question. To that end, Douglas describes the process of 'labelling' to quicken the pace of understanding stimuli (Douglas, 1966). The process of classification and interpretation that Douglas describes begets a reliance on language – and available words - in allocating labels and associated meaning. In this way, classification enables communication between and within social institutions noting that 'Order is the basic requirement for communication…' (Douglas 2002, p.61).

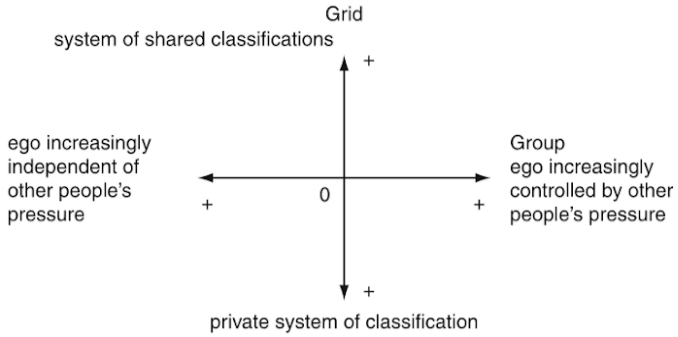
To summarise, classification serves multiple purposes as part of social ordering: i) the ability to manage dirt and danger, ii) enabling social organization and restraining conflict, iii) enabling swift interpretation of stimuli, and d) facilitating interpersonal and intra-group communication. Nevertheless, there are several aspects relating to classification as set out in NDIT that would benefit from further exploration. In particular, the degree to which classificatory boundaries serve to create coherence or conflict, would be worth investigating. Additionally, the significance of classificatory systems in the management of risk within an organisation, and their impact on a corporate institution would be worthy of review. This has not been attempted to date. Douglas' work studies classification of food and animals, and the use of classificatory systems as part of an NDIT model has been studied by Perri 6 within governments (6, 2011) (6, 2014). However, the role classification in creating or sustaining risk management practice or underpinning risk culture has not been specifically examined.

What happens when classification systems are disrupted is also worthy of exploration as part of NDIT studies. Disruption of classificatory systems, at least some of the time, appears inevitable. Treatment of anomalies is described as a way to maintain a sense of purpose, galvanizing the classificatory system and the social boundaries (Douglas, 1966). In *Purity & Danger*, Douglas describes three distinct approaches to 'confronting' anomaly – ignoring it altogether, embracing and updating classificatory systems (classifications held personally or publicly), or taking action to avoid or control it. In his study of political judgement, Perri 6 (2011; 2014) describes distinct types of treatment that can be expected in response to anomaly within institutions and argues that response to anomaly is dependent on the dominant culture within an institution. Depending on the dominant culture, the response to identified anomaly could be accommodated and explained (as part of an NDIT Hierarchist culture), exploited to suit opportunistic aims (as part of an NDIT Individualist culture), strongly rejected (as part of an NDIT Enclavist culture), or tolerated and absorbed (as part of an NDIT Isolate culture) (6, 2011). This suggests

the level of classification present, and the treatment of anomalies, might be strong indicators of risk culture within an institutional setting and can be investigated in this study of a FS firm. However, prior NDIT research has not considered classification and anomalies as they relate to the management of risk.

The concept of classification is central to the evolution of the NDIT model, as Fig 2.1 below shows. Douglas demarcates private and individual classificatory systems, and shared and social systems. Public and 'private' types of classification are considered of equal importance and are represented on an axis, with public classification exerting a strong pressure over individual actions, and private classification impacting the fringe and marginalised areas of society (Douglas 2002). The 2x2 matrix in Fig. 2.1 shows the evolution of the NDIT model in *Natural Symbols* using classification and social pressure to discriminate types of culture. The diagram depicts the Douglasian concepts of Group and Grid emerging from Douglas' discussion of social pressures and classification. Group and Grid will be explored in detail later in this chapter.

Fig 2.1: Grid and Group: from *Natural Symbols* (1970)



(Douglas 2002, p.64).

The model in Fig. 2.1 attempts to integrate personal views into a model of social interaction. Personal views are described as 'private thought' in *Natural Symbols*, is discussed in relation to social classification, and it is argued that private philosophies do not coexist with systems of heavy social pressure. Douglas asserts that drawing on 'private philosophy depends on an accompanying isolation from social pressures…' (Douglas 2002, p. 65), meaning that social pressures necessarily dictate personal views. However, it is questionable whether Douglas can discount the impact of private thought on social organization, as it could be that private thought impacts social pressures, if more indirectly. There are

certainly opportunities for future research to evaluate the impact of private thought within the NDIT model.

Furthermore, the theme of classification and treatment of anomaly within Douglas' work seems particularly relevant to a study of risk culture. The process of identifying and managing risks involves classification of items and management of anomaly to mitigate danger and limit loss. Risk management involves the identification of factors that might be classified as dangerous (or unsafe) and the identification of measures which are able to prevent, detect and correct these. It is therefore possible to imagine cultural responses to risk could be grounded in classificatory systems and the identification of anomalies. Additionally, the type of organisational reaction to anomaly could vary depending on what type of anomaly has emerged. For example, anomaly could present immediate practical concerns (such as the avoidance of danger) or deviate from symbolic or moral expectations, which are then considered to represent a risk. The implications are that, through the negotiation of classificatory boundaries and management of anomaly, risk perception across an organisation is influenced by social ordering.

The next section presents the causal process from which classifications are thought to originate and by which they are maintained, namely through ritual actions.

2.2.2 Ritual

The concept of ritual was introduced by Douglas in *Purity & Danger* (1966) as a method of generating and maintaining classificatory systems. Ritual in the context of NDIT can be understood as a social act that carries significance and meaning – and crucially – bonds an individual with a social group or setting by generating an emotional response or perpetuating accepted classificatory boundaries. Douglas also discusses the meaning of ritual as part of a broader set of 'symbolic acts', or 'action and belief in the symbolic order' (Douglas 2002, p.2). In *Natural Symbols (2002)*, the concept of ritual is presented as a means of explaining social interaction and group cohesion, specifically group patronage, allegiances, hierarchy. Douglas also argues that ritual is a method of control and communication within a group setting; it comprises a 'restricted code' between members, driven by a need for efficiency and to establish and maintain social boundaries (Douglas 2002, p.25).

Douglas illustrates that ritual can take many practical and symbolic forms. As with classificatory systems, rituals can be socially enacted or private, and a formal or informal activity. Religion is perhaps the most obvious form of institutionalized ritual, comprising performances, processes, language and the regular gathering of groups of people, though can equally manifest in non-religious settings.

Additionally, cleanliness is the focus of Douglas' discussion of ritual in *Purity & Danger* (1966). Douglas' wider body of work examines the treatment, segregation and gifting of animals as part of marriage ceremonial (6 2017) and explores the weight of meaning associated with the act of preparing a meal – the timing, the type of ingredients, its healthiness, level of care and thought involved, that it is often part of a family gathering, and the type of dialogue prior and during preparation (Douglas 1972). Douglas later commented on the impact of ritual in human psychology and biology, in reference to 'rhythms' and the use of percussion in many ritual performances (Gosden 2004). It has also been argued that the way people greet each other, the layout of meeting rooms and acceptable / unacceptable forms of speech (6, 2017) are types of ritual. Therefore, in a modern, institutional or organisational context, ritual can be less formalized and grand, and may not be performative, but more mundane. The practical utility of the activity in all these examples seem to be surpassed by their social value.

Douglas acknowledges that ritual may not always convey conscious meaning or involve psychological commitment from the performer – and can simply be habitual or a product of conformity. This point is discussed by Douglas in *Natural Symbols*, and elaborated on in later work – 'Hasn't anyone ever been bored in church?...' (M. T. Douglas, 1986, pg.34). Douglas concludes in *Natural Symbols* that for anthropologists, the risk that ritual is 'ritualised' or empty, is an inevitability, but that this does not make the term or its potential possibilities less worthy of review (Douglas 2002).

It is important to note that other scholars have also recognised the role of ritual in defining and sustaining organsational culture. Deal and Kennedy (1983) define rituals as '…systematic and programmed routines of day to day life in the company…to show employees what is expected of them' (Deal and Kennedy, 1983, p.14). The authors describe examples of meeting composition and frequency, employee awards, the existence of role models, communication vehicles, and company slogans as examples of rituals. Similarly, Trice and Beyer (1984) advocate for studying culture via rites and ceremonials. They propose a typology of six rites, describe them as way for organisations to sustain their social life, and argue that they are best used when underpinned by a robust set of organisational values. Trice and Beyer (1984) also note that sustaining values via rites and ceremonials can sustain and strengthen the organisation in desired ways, but may also have implications for adaptability and change. They encourage practicing managers to consider the consequences of the rites and rituals utilised within the organisation and how they could be evolved to engender change. Anthropological scholars have further studied formal and informal meetings as a type of ritual practice (6 and Peck, 2009; Schwartzmann, 1989). However, the aforementioned work does not assess the role of ritual in the context of organisational risk-taking and managing cultural responses to risk.

In view of this, Therefore it is worth exploring how rituals are used in the management of risk, an area that has not been evaluated by existing NDIT literature either. Examples of rituals which might be relevant in this context could include type of office space and ordering of space according to hierarchy, order and format of meetings (degree of formality), and preparation of reporting and management information. It seems possible that rituals within an organisation could create either a practical protection against risk, or, provide a greater level of comfort through social ordering. Therefore, this study may provide some insight into which elements of risk management activities within an organisation could be considered ritualistic in nature, which genuinely control risk exposures and which serve to provide a sense of security and develop social cohesion for the organisation.

To summarise, classification and ritual are key themes underpinning Douglas' NDIT theory and are discussed extensively in her earlier works. They are positioned across Douglasian literature as a causal mechanism for social organisation and can also be used to sustain social ordering. The concepts of ritual and classification are essential to the NDIT model of understanding institutional culture and are appealing as analytical devices in their own right for the study of risk management in a FS firm. However, they are also fundamental in Douglas' articulation of both the Group and Grid dynamics, which is the focus of the next section.

2.3. Grid & Group

Group and Grid are independent and complementary dynamics that underpin the NDIT model (fig. 2.1), and support Douglas' aim of drawing together social ordering and individual cognition into a single framework. At a very high level, Group represents a dynamic of social integration, and Grid represents a dynamic of social regulation. However, the development of these dynamics has been iterative across NDIT literature, and ambiguity remains in some areas. A multitude of theoretical concepts and influences can be traced to their formation, which are explained below.

2.3.1 Group

Douglas' concept of Group evolved over time and draws on wider bodies of anthropological thought, including Durkheim. In Douglas' early work, such as *Natural Symbols*, Group is derived from the idea that 'restricted code' embodies a mechanism of social control (Douglas, 2002). The interpretation of 'restricted code' draws on educational theorist Basil Bernstein's models of family control, in which Bernstein attempts to articulate variations of family protocols and types of speech, restricted and

elaborate. Two types of family control are posited – one based on positional (hierarchical) values and strict order, and one based on personal values, with an emphasis on individual motivation and flexibility of thought. The concept of Group also originated from Durkheim's theories of mechanical and organic solidarities, from *Division of Labour*, 1893. Durkheim describes two types of solidarities - mechanical solidarities and organic solidarities. The former concerns a type of cohesion that occurs when individuals possess homogeneity across classifications (including values) and organic solidarity based on mutually beneficial accommodation of difference. Durkheim then argued that organic solidarity is growing within industrial societies, bringing with it an individualist culture based on the division of labour. In *Suicide, a study in sociology (1951)*, Durkheim presented evidence that social integration and group dynamics impact an individual's will to live; central to this is the degree to which the individual is meaningfully integrated within a society or community (Alexander & Smith 2005).

Douglas integrates these ideas from Bernstein and Durkheim into a social model. In *Cultural Bias* (1978, 1982), definitions of Group and Grid emerge, both of which help place an individual within social organisation. Group is defined as:

> …[the] claims it makes over its constituent members, the boundary it draws around them, the rights it confers on them to use its name and other protections, and the levies and constraints it applies. (Douglas 1982c, p. 191).

Group can therefore be understood as the extent to which an individual is subjected to constraint because of, voluntarily or otherwise, being part of a social group.

Furthermore, in *How Institutions Think* (1986) Douglas offers an explanation of how Group 'mentalities' are formed and sustained. Douglas asserts that institutions do not have minds of their own, independent of individuals, but that these mindsets are created through commonality of their constituent members. In this work, the ideas of Durkheim and Fleck are used to support the idea that group solidarity can only exist, as can co-operation at all, if people share ways of thinking, and further, that cognitive processes are not just influenced but programmed by social groups. To illustrate this, Douglas cites evidence (via Fleck) to suggest that social solidarities accept or dismiss academic or scientific theories based on existing acceptability within a social setting, rather than inherent worth (Douglas, 1986).

In forming a group solidarity, Douglas postulates that organisations assume a specific identity or agenda that gives it legitimacy, such as an internal logic or grounding in nature, and this becomes an analogous way of members negotiating around an accepted set of rules. Organisations then use 'memory control'

(the acceptance or rejection of new facts) and classification to stabilise these rules. To develop this idea, in *Cultural Bias* (1982) Douglas describes 'cosmological derivatives' such as nature, health, foreign travel, use of domestic spaces and justice to explain how solidarities are sustained and the type of qualitative pressures that might underpin them (Barker and Douglas, 1984). This suggests that the nature of social pressures is rooted in shared values and could be context specific and different in each setting.

To conclude, some key themes relating to the concept of Group within the NDIT model would be worthy of further review. Firstly, even if language, the division of labour, or shared values (as Bernstein, Durkheim and Douglas suggest) are mechanisms to create societal pressures and solidarities, a question remains about how their qualitative nature is determined and what those qualities are. Douglas' explanations remain somewhat ambiguous:

> Somewhere away from the level of the English family and home, some machinery is grinding out a set of social pressures. Naked power is decently clothed and made legitimate. (Douglas 2002, p.60).

Furthermore, further analysis could further evaluate the relationship between an individual and social structure, and for explaining how a 'collective conscience' can be derived that accommodates difference and private thought. It is vital that the role of the leader and individual, particularly in engendering change, is clear, to understand the extent to which NDIT could influence decision-making in an organisation.

2.3.2 Grid

Like Group, the dimension of Grid has evolved as part of NDIT literature and is firmly grounded in the Douglasian depictions of classification and ritual. In *Natural Symbols*, Douglas asserts that Grid is derived from systems of classification, public and private, with 'high' Grid representing robust alignment to a public set of classifications (Douglas 2002). Grid is developed further in *Cultural Bias* (1978) to represent a series of regulations, which exert control over an individual, and limit the scope of personal choice. In this sense, Douglas conceptualises Grid as the proportion of an individual's life that is open to negotiation (high Grid means there are low levels of negotiation on the part of the individual). There is an acceptance however that whilst individuals possess agency, they often accept regulation that produces beneficial outcomes for them - for example, reliability and consistency of interactions with others.

Whilst Grid can be understood broadly as social regulation, descriptions across the literature vary from specific to broad. Whilst Douglas' work refers to established hierarchies, expected behaviours, power

structures and actors, rigidity of laws and customs, other authors including Rayner (1992) have also portrayed Grid as constraints associated with personal attributes of kinship, race, gender, age. Gross & Rayner refer to Grid as 'a complementary bundle of constraints on social interaction', and with specific reference to roles that are either 'ascribed' (high Grid) or 'achieved' (low Grid) (Gross and Rayner, 1985, p.6). Bloor depicts Grid as gradations of rank, varying rights and duties and expected kinds of behaviour, with the Army and bureaucracies embodying high Grid (Douglas, 1982). Kahan summarises Grid as the pervasiveness and significance of social differentiation, and that it informs the distribution of resources, opportunities, and respect (Kahan *et al.*, 2007). At a more detailed conceptual level, Gross & Rayner (1985) and Hampton (1982) have set out 'predicates' for both Group and Grid that summarise the common attributes for both dynamics. A more comprehensive review of these is presented in Chapter 3 where the methodology for this study is detailed.

There have been various attempts to amend and update the theory of Grid. Spickard (1989) draws out inconsistencies across *Natural Symbols* (first and second editions) and *Cultural Bias* in the conceptualisation of Group and Grid, suggested that the concept could be split into multiple components. Specifically, Spickard observes that the emphasis of Grid shifts across these three works: from a series of obligations to others, to an emphasis on classificatory systems, and then to restrictions on personal choice. Spickard's challenge was then addressed by Douglas in a paper dedicated to explaining the Grid dimension (Douglas, 1989). Whilst Douglas attempts to clarify elements of the Grid dimension, she acknowledges the difficulties in '…working on a social dimension such as structuredness (or Grid)…'(Douglas, 1989; p.179), and suggests that the utility of the overall NDIT model (in explaining social interactions) is more important than conceptual coherence. However, in explaining Grid further, Douglas refers to Bernstein's understanding of education systems and the insulation / specificity of roles in this setting. Degrees of 'insulation' is said to impact levels of autonomy, ambiguity and competition within a social setting and what is meant by insulation needs to be precisely specified in each case (Douglas, 1989). This paper also signals concurrent development of the Grid dynamic by Michael Thompson, who has incorporated competition between individuals and a dynamic element of what is negotiable and non-negotiable within Grid forces.

Grid therefore appears to be the more ambiguous and multi-faceted of the elementary forms. Also open to question is the extent of commonality across social contexts for Grid – whether there are common observable behaviours or practices, or whether Grid naturally manifests differently depending on the context. A question also remains as to whether Grid is a consequence of social control, rather than, as *Natural Symbols* and *Purity & Danger* had suggested, is a precursor. An overarching challenge is also

being able to translate broad concepts such as 'insulation' and aforementioned predicates into examples in concrete social life. Without sufficient tangibility measuring either Group or Grid becomes challenging.

Whilst this is not stated in Douglasian literature, it seems possible that Grid may play a role in the generation of Group pressures by creating and sustaining classificatory systems that inform social cohesion. For example, rules and procedures within a workplace could be described as social regulation, but they also appear reliant on the cooperation of individuals, and general acceptance that such rules and procedures are necessary to sustain the organisation. In this way, Grid could be reliant, to a degree, on Group for cohesion and sustenance.

2.3.3 Group and Grid: A conclusion

NDIT scholars have remarked on the variety of descriptions that have been provided over the years for Group and Grid. Although themes such as classification, ritual, language, solidarities and more general definitions of regulation contribute to the dynamics, how each dynamic is understood remains open to discussion. Conducting NDIT research using the concepts of Group and Grid therefore means accepting some assumptions about their nature and the social behaviours and interactions that they represent.

The broadness and wide applicability of the NDIT model is a theoretical strength, but also means that the foundational concepts are subject to debate and re-interpretation. Douglas states an intention of articulating the Group and Grid model was a way of moving sociological and anthropological observations from subjective and relative ("…being surprised that Frenchmen talk French…" (Douglas 2002, p.xi), and to enable meaningful comparison and analysis across environments. It could be argued the application of the model is of greater importance than precise and irrefutable definitions of Group and Grid. However, to use the model in NDIT research involves an adequate and defensible articulation of the theoretical components. This remains a key challenge for any research in this field.

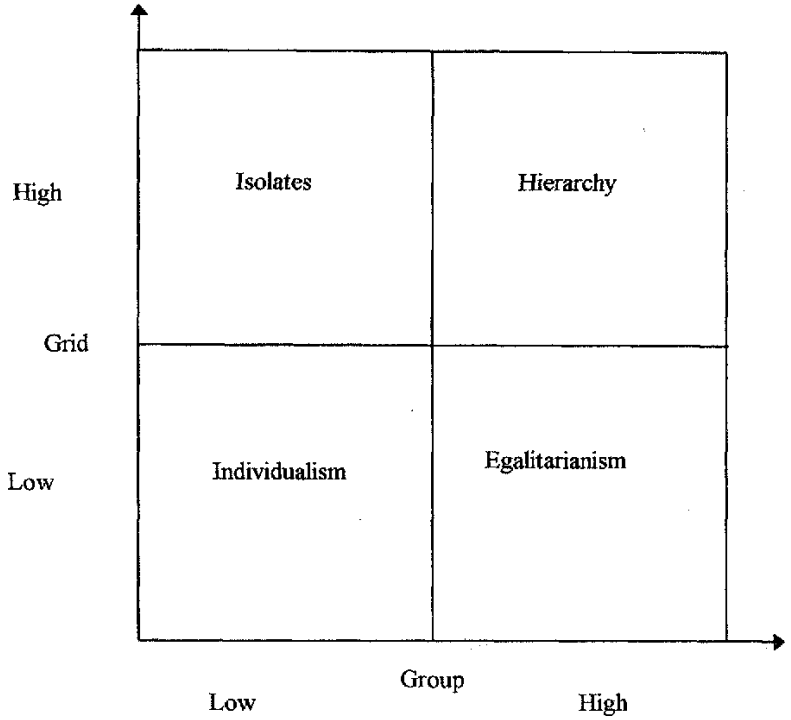
Perceived theoretical omissions in the Group and Grid concepts have led NDIT scholars to propose amendments and alternative vectors. Maleki and Hendriks proposed an additional vector – Grade (Maleki & Hendriks 2015). High Grade culture represents societies in which dominance and mastery are valued, whereas low Grade cultures are more in favour of harmony and compromise. This addition to the theory is an attempt to incorporate individual competition into NDIT as a standalone dynamic, rather than part of either Group or Grid, or as part of the Individualist worldview. Maleki and Hendriks state that empirical evidence from studies of national cultures supports competition as a variable independent of Group and

Grid (Maleki and Hendriks, 2015). Similarly, Thompson proposed an additional vector called 'Grip' which is used to justify a fifth way of life that is wholly autonomous and hermit-like, to explain individuals that are withdrawn from social life (Douglas, 1982). Both Grade and Grip are developments to the foundational dynamics of NDIT that attempt to address perceived limitations in the model, particularly when viewed against empirical examples of culture and of policy development. However, appending NDIT with these additional dimensions adds complexity to the model, and the fundamentality of a third dimension is open to question. That Grade and Grip were developed in response to perceived situational 'fit' is also problematic from a theoretical perspective, as it could interfere with the overall integrity of the model. The current community of NDIT researchers have not adopted these innovations and continue to focus on the Douglasian concepts of Group and Grid, which will also be used in this study.

2.4. NDIT Thought-Styles

Having reviewed the theoretical basis for Group and Grid dimensions a critical analysis of how the dimensions impact social functioning and cognition follows. Once defined, in *Cultural Bias* Douglas cross-tabulated Group and Grid into a 2x2 matrix comprising four 'spaces' which the theory then develops into 'thought-styles'. The four spaces represent a particular way of organising depending on where a social group is located against the Group and Grid continuous scales. An early version in Douglas' works is presented in fig.2.1 and is articulated again in fig. 2.2 below. It is crucial that the interpretation and application of NDIT carefully considers the breadth of concepts and nuanced arguments, explained in this chapter, that underpin its creation. The simplicity of the 2x2 matrix could be misconstrued particularly within a large organisational context, leading to heuristic or diagnostic application of the theory. This could be a particular danger for management studies that use NDIT; the 2x2 format could be likened to reductionist populist management theory (for example, Ansoff, BCG matrices). Caution must be exercised in management studies to ensure it does not become a heuristic diagnostic tool of culture.

Fig 2.2: Cross-tabulation of Group and Grid and resultant NDIT thought-styles *(Tansey & Riordan, 1999, pg.78)*



Consideration must now given as to what each of the four spaces within the Group and Grid matrix represent. In Douglas' early work, the four matrix areas are determined as 'elementary forms' - a direct reference to Durkheim's 1912 work of the same title. However, *'thought-styles', 'way of life', 'cultural biases' 'solidarities'* and *'worldviews',* are terms also used throughout Douglasian literature to refer to the four areas of the matrix, and it is not clear to what extent these terms are theoretically distinct.

Importantly, four is the minimum number of cultural biases inferred from this model. Douglas states in *Four Cultures, an evolution of a parsimonious model* (1999), that '…eleven thousand or million would not be enough to cover the variety that is out there…' (Douglas 1999, p.141). The four spaces within the matrix came to be known as Hierarchist, Enclavist, Individualist, and Isolate forms of social organisation in Douglas' later work, including *Risk & Blame* (1992). Other NDIT scholars, including Wildavsky, have adopted different names for two of the thought-styles – Egalitarian / Sectarian for Enclavist and Fatalist for Isolates. These have been rejected by others due to the political and psychological attributes that those labels infer. Crucially, NDIT is concerned with how groups of people think, not what they think.

There are various descriptions of each of the four thought-styles in NDIT literature, and these continue to be debated. Typically, NDIT researchers focus their understanding of thought-style on their 'ways of organising' and relational patterns, rather than any economic, political or social attributes. Such a transferable model achieves the aims of NDIT in being able to explain collective consciousness and social relations across all institutional settings, whilst acknowledging that the qualitative manifestation of culture may vary by setting. Thompson et al in *Cultural Theory* (1990) positions 'vignettes' of each and positions a fifth the 'autonomous' or 'hermit' – who inhabits the centre of both axes and are not influenced by either Group or Grid forces. Thompson's view of each thought-style is very much typified according to what an individual might think or do – high-caste Hindu villager (Hierarchist), unionized mill worker (Isolate), self-made manufacturer (Individualist) and a Western communard (Enclave). It is perhaps easier to discern cultural variations across such typified examples as there are distinct differences in wealth, power, and social ties. However, in other contexts the delineation between thought-styles may vary more subtly. Therefore, a challenge for NDIT researchers is to evidence the manifestation of at least four thought-styles across a comprehensive set of cohesive organizational or societal contexts.

Douglasian scholar Perri 6's summary of the four thought-styles is in Fig. 2.3 below, which details the typical ways of organising and relational patterns of each (as opposed to belief-systems). This view is a valuable basis to understand the preferences of each thought-style towards institutional power, blame, social co-ordination, and shared values. The nature of each NDIT thought-style remains open to debate however, and this study will seek to identify the four thought-styles in the UK Insurer and provide additional insight into how the resultant cultures think about risk.

Fig 2.3 The basic forms and their solidarities (6, 2006, pg.99)

Social regulation ⇧	*Social relations are conceived as if they were principally involuntary* tragic view of society ⇧		
Individual autonomy should ⇦ not be held accountable	**Isolate** *Co-ordination:* none: all systems are capricious Social network structure: isolate; casual, shallow ties, occasion-bound networks Value stance: personal withdrawal (e.g. from others, social order, institutions), eclectic values Institutions: suspicious of the efficacy of any institutional design *World views:* fatalism at the bottom of society and despotism at the top of society *Blame strategy for power:* 'no point' *Weakness:* tends to be poor in predicting and responding strategically to new situations, shocks, etc (this may not be seen as a problem since the basic belief is that there is little one can do about change)	**Hierarchy / central community** *Co-ordination:* regulated systems are necessary: unregulated systems need management and deliberate action to give them stability and structure Social network structure: central community, controlled and managed network *Value stance:* affirmation (e.g. of social values, social order institutions) by rule-following and strong incorporation of individuals in social order *Institutions:* rational, steerage capacity, rule-dominant *World view:* hierarchy Blame strategy for power: violation of rule and role *Weakness:* tends to produce brittle systems and networks, vulnerable to unexpected shocks from other solidarities (this may not be seen as a problem since the basic belief is that other solidarities are essentially reactive, and the task is keep systems within bounds where vulnerability can be minimised)	*Individual autonomy ⇨ should be held accountable*
	Individualism *Co-ordination:* spontaneous, hidden hand: regulated systems are unnecessary or harmful: effective system emerges spontaneously from individual action *Social network structure:* individualism, markets: open, configurations characterised by weak ties *Value stance:* affirmation (e.g. of social values, social order institutions) by personal entrepreneurial initiative *Institutions:* self-restricting, transparent, nonintrusive, guaranteeing basic property rights, etc. *World view:* libertarianism *Blame strategy for power:* intrusion, disturbance of spontaneous process *Weakness:* tends to be poor in solving collective action problems (this may not be seen as a problem since collective action problems are not recognised as problems worth solving)	**Enclave** *Co-ordination:* charismatic, mutual: regulated systems are oppressive – except when they protect *Social network structure:* enclave, sect, inward-looking Value stance: collective withdrawal (e.g. from perceived 'mainstream'), dissidence, principled dissent *Institutions:* charismatic, value-dominant, solidaristic *World view:* egalitarianism Blame strategy for power: failure to protect, violation and pollution of fragile order *Weakness:* tends to schism in network structures (this may not be seen as a problem because the basic egalitarian belief is in small, tightly cohesive, transparent community)	
	⇩ Heroic view of society *social relations are conceived as if they were principally voluntary*		⇨ Social integration

As the Group and Grid framework is agnostic of context and qualitative attributes, NDIT maintains that no one of the four thought-styles are more desirable, good, or important than the others. Douglas comments in *Being Fair to Hierarchists* that *'*Cultural theory gives no normative lessons about preferring one culture over another…' (Douglas, 2013, pg.274). NDIT literature emphasises all thought-styles give

rise to cultures that can be perceived as good, or if unmitigated and allowed to flourish to excess, can cause harm. For example, Enclavist ordering can produce both small tight-knit communities, and jihadist terrorism as Douglas and Mars (2017) argue. Fear of loss of control associated with Hierarchism can lead to poor stakeholder relations and inertia, as Thompson argues is the case with the United Nations (Thompson, 2004), but it is also the structural force in religious institutions and family homes (Douglas, 2005). Isolate thought-styles present across unionized mill workers as Thompson argued, though are also thought to be common across public service delivery (Hood, 1998). Individualism could be considered to underpin policy decision-making preceding the 2008 financial crisis (Linsley, Shrives and McMurray, 2016), but is also an environment that allows creative artistry to thrive, as argued by Douglas in *Cultural Bias* (Barker and Douglas, 1984, pg 243). Furthermore, as Mars argues in *Cheats At Work* (1982), each culture is liable to undertake unethical or 'fiddling' behaviour, albeit justified through different means. However, Douglas published *Feeling for Hierarchy* (2005) in which she revealed her own personal affinity towards Hierarchical ordering stemming from her experiences in the family home and religious education. She specifically references Hierarchist characteristics such as the institution of authority, managed communication, respect, segregation of power, and its comprehensive and universal nature (Douglas, 2005, pg.20). Without a comparative assessment of the other thought-styles it is difficult to affirm Douglas' positive assessment of Hierarchy. Generally, Douglasian scholars do not claim any thought-style is more desirable than the others across any context.

As explained further in the next section, there have been significant differences of opinion across NDIT and Cultural Theory scholars on how the theory is best applied and used. The terminology used to describe the four spaces within the Group and Grid matrix also depends on how researchers interpret and use the NDIT model. This study will use term 'thought-styles' because it integrates the concept of social activity with the inwardly held beliefs and emotions of individuals, and appears agnostic of context and qualitative ideas. By contrast, the term 'worldview', which is commonly used across CT research, indicates an assumed position on topical matters. It was not intended by Douglas to be an ideational model of what social groups think, rather how they think. The terms 'cultural bias' or 'solidarities' are alternative terms, but again, appear to point to socially generated ideals. Furthermore, 'bias' can be considered a negative term that confers irrationality, whereas is no suggestion in NDIT that any thought-style is more rational than the other. Therefore, for clarity and simplicity, 'thought-styles' will be used throughout this research to denote the four spaces in the Group and Grid matrix.

The next section explores how each of the four thought-styles are thought to interact, and what this means for analysis of culture using the NDIT model.

2.5 Thought-Style Dynamics

The functionalist nature of NDIT means it is necessary for all four thought-styles to exist in all organisations, and for them to interact and influence each other. Consequently, each of the four 'spaces' in the matrix hold a relative purpose to each other, and each are responsive to the actions of each other. The coexistence of the four-thought styles and their relationship with each other is described throughout the NDIT literature, and will be explored in this section. Understanding how each thought-style influence each other to perceive risk and ways of managing risk may be is of particular interest to this study.

2.5.1 Thought-Style Co-existence and Interaction

As explained in section 2.4 above, the NDIT model necessitates a minimum of four co-existing thought-styles. Douglasian scholars have demonstrated that the four thought-styles operate as part of a functionalist model – that is, each thought-style serves a purpose (but not necessarily a benefit) relative to the others, with the presence of each forming a coherent whole. For example, Thompson, Ellis and Wildavsky in *Cultural Theory* (1990) developed a logical conception of how thought-styles, driven by social groups (Group) and networks (Grid) are required to co-exist thus sustaining each other. This work argues that both groups and networks by their definition are reinforcing, and therefore sustain the resultant multiple thought-styles. It is through conceptualisation of each of the thought-styles that it is possible to explain how they serve a purpose to each other.

Further, interaction of the thought-styles is a necessary element of the functionalist nature of NDIT. NDIT allows for the possibility for both cohesion and conflict between thought-styles, and is therefore extensively used as a model to explain conflict and resolution in societies and organisations. In *How Institutions Think* (1986), Douglas argues that ritual cultivates thought-styles, and that a feedback loop is created. This feedback is either positive and reinforcing, or negative, and engenders conflict. Thompson developed the theory by applying human cybernetics (Chapter 2 in Douglas, 1982), in order to explain the interaction between thought-styles and how change is possible through combinations of feedback processes (6, 2017). This contribution to NDIT theory helps explain change and instability within organisations and societies – for if the thought-styles remained static and did not change and interact, the environment would stay the same.

Perri 6 (2017) explains that through the interaction of the four thought-styles, individuals may seek to re-align themselves to other thought-styles: "…people disappointed in any one form can only turn to one or

more of the other basic ways of organising to cope, evade, revolt, or attempt to reassert control" *(6, 2014,* p.292). Conversely, individuals can become deeply entrenched in the common beliefs within thought-style and seek to protect it from the influence of other thought-styles: "Amplification, self-radicalisation, and bandwaggoning processes follow trajectories of positive feedback…" (6 2014b, p.292). The interaction between individuals and thought-styles helps to explain the motivations for actions by groups of people. An example of this is terrorist acts, which can be interpreted in NDIT as a ritualistic act driven by social consciousness (6, 2017).

NDIT therefore provides an explanatory framework for both social stability and social conflict via the formation and interaction of thought-styles. As an all-encompassing framework, NDIT can, in theory, be deployed across social groups and organisations to account for their activities. However, much of NDIT remains at a highly theoretical level and therefore questions remain about the nature of thought-styles and their interaction. This study aims to identify thought-styles within a FS firm and derive conclusions on how these interact and influence each other on the perception of, and management of risk.

2.5.2 Clumsy Solutions

This section outlines the concept of 'Clumsy Solutions' as a product of interaction between the four NDIT thought-styles. 'Clumsy Solutions' is a normative extension of NDIT theory and attempts to explain how practical responses to a problem are derived when there is conflict or misalignment of views amongst the four thought-styles. NDIT theory suggests that because multiple thought-styles exist in institutions consensus will never be achieved on risk and policy decisions that are developed to meet the needs of just one. Therefore, practical resolutions to problems will be required that appeal, at least to some degree, to each thought-style, and are therefore 'clumsy' in their design. They are designed to appease each thought-style but are perhaps not the most straightforward solution to a particular issue. 'Elegant' solutions to identified risks that align to the needs of just one thought-style will inevitably fail because each of the four, in their unfettered state, are assumed to undermine themselves and become ineffective (Verweij & Thompson 2006). One such example of an 'elegant' solution is in the treatment of climate change; Verweij cites the Kyoto protocol as a failure to manage climate change through formal and monitored government agreements that appealed only to the Hierarchist thought-style (Verweij & Thompson 2006). Similarly, John Adams in Verweij (2006), argues that Hierarchist legislation for seatbelt usage in the UK which has failed to increase road safety.

Typically, NDIT literature illustrates the concepts of Clumsy Solutions and 'clumsy' institutional decision-making via real-world case studies. Thompson provides the example of Arsenal Football stadium, which was relocated to a place that Thompson argued appealed to all four thought-styles, following a clumsy negotiation (Thompson 2008). Other work proposes that clumsiness might provide a way of addressing problems that have so far evaded satisfactory resolution. Grint (2010) uses Clumsy Solution theory to propose alternatives to default organizational leadership that tends embody a hierarchical / authoritarian style and underestimate the collective influence. Similarly, Khan and Neiss (2010) propose alternative approaches to rebuilding fish stocks, arguing that 'elegant' solutions have failed to date. Linsley and Shrives (2014) utilize NDIT to dissect dialogue to the Financial Reporting Council on styles of financial reporting, and then demonstrate the need for hybridity in approach, because input from all four worldviews is required to develop sustainable policy.

It could be argued that the concept of Clumsy Solutions merely represents practical compromises to satisfy divergent agendas. Furthermore, it is unclear whether Clumsy Solutions can be evidenced across all organizational and social contexts and size of constituent groups, as NDIT theory would expect to be the case. However, this normative extension to NDIT is of importance because it further illustrates the interaction of thought-styles, and in particular, the practical consequences of conflict between the thought-styles. It also suggests that in practice the thought-styles must collaborate in solving problems and identifying mutually acceptable solutions within a social context.

2.5.3 Social Solidarities and Individual Agency

This section examines the role of individual agency within the NDIT framework of four thought-styles. Agency can be understood as the exercise of choices and individual decision-making (6 and Richards, 2017). An outstanding area of debate amongst Douglasian scholars is whether the NDIT framework to measure social activity also extends to all psychological activity and personal agency, and if not, where the demarcation lies. Understanding interaction between personal agency and thought and the NDIT thought-styles is critical, particularly in the study of how organisational cultures are formed. Without clearly situating agency within NDIT, the notion of institutional mindsets becomes tautological and circular, and the model cannot explain how individuals navigate groups or instigate change. It also infers that individual beliefs are either immaterial to institutional settings or are usurped by institutional mindsets.

As outlined in section 2.2, Douglas' foundational concepts of Group and Grid explicitly integrate personal psychology into the model of social interaction, and it was her stated aim to align the two. It is inferred therefore that personal agency is influenced and moderated by thought-styles. Importantly however, NDIT does not try to determine the entire belief system of individuals or completely restrict agency. Douglas is clear in *Cultural Bias* (1982) that the scope of NDIT encompasses those actions that could be justified by one individual to another within the social institution, but not all internal beliefs. This is an interesting distinction for it means that individuals have the flexibility to hold privately conflicting views, though may elect to compromise these to inhabit a social space. Douglas furthermore recognizes the tension between human agency and institutional thinking and that it is unreasonable to state that individuals never make any rational decisions based on self-interest and independent personal beliefs. Theories of justice hold that they do. She also acknowledges that Durkheim was criticised for downplaying the role of the individual in organising thought (Douglas, 1986) and that Fleck and Kuhn were both sceptical about the idea of 'thought collectives' to explain how individuals think (Douglas, 1986).

Therefore, Douglas' seeks to explain how individual agency is possible within the NDIT Group and Grid model, and attempts this in various ways. Douglas proposes in *Cultural Bias* (1982) that different personalities will respond differently to Group and Grid positions (Barker and Douglas, 1984) suggesting that individuals possess innate qualities that are in turn influenced by each NDIT thought-styles. Douglas subsequently argues *How Institutions Think (*1986) that the role of personal agency depends on the relative size or importance of a decision being made:
"The individual tends to leave the important decisions to his institutions while busying himself with tactics and details." (Douglas 1986, p.111)

However, difference between 'important decisions' and 'tactics and details' is not immediately easy to quantify. Furthermore, the idea that scale must also be achieved for 'important decisions' is also theoretically problematic for 'individualist' solidarity or small Enclavist groups that rely on a degree of individual autonomy to avoid a Hierarchist consistency. Douglas further explored the relationship between social solidarities and the individual in her 1998 work with Ney, *Missing Persons: Critique of the Social Sciences.* This represented an attempt to fully integrate private rationality and agency with the NDIT model. She integrates them by proposing styles of agency that outline the '*position of ego'* (Douglas, 1998 pg.106) according to the NDIT thought-style that individuals belong to. It is argued that the nature of agency is shaped by interacting with the judgments of others from each thought-style. For example, it is proposed that Isolate ordering will generate agency that is short term and reactive,

Hierarchist agency will be rule-based and structured, Enclavist agency will be limited to shared principles and Individualist agency will seek to develop robust and independent agency (Douglas, 1998). Douglas' infers therefore that individual agency, personal beliefs, and emotional response are all guided by the NDIT thought-styles, and people will act in accordance with these biases. In many respects, the proposals in *Missing Persons* give useful context and rationality to agency and personal beliefs, but prompts further questions about what exactly individuals are permitted to do in response to personal beliefs. For example, it is unclear what circumstances individuals could resist and reject the biases associated with their current thought-style - to what extent could a Hierarchist disregard the classificatory norms, rules and role prescriptions inherent to their high-Group and high-Grid environment. It also implies that there is never a disconnect between social activity and personal belief. This appears to contradict Douglas' acknowledgement in *Natural Symbols* (2002) that individuals can observe ritual without associated psychological commitment, as illustrated by the 'bored churchgoer' example (section 2.2.2 above).

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To conclude, although Douglas actively and repeatedly addressed the issue of personal agency and beliefs (for example, *Missing Persons* (1998) and *How Institutions Think (1986))* the role of personal agency within NDIT warrants further examination. The inference that NDIT thought-styles are all-encompassing of agency appears counter-intuitive, and may limit the scope of creative thought and the ability for an individual to navigate across thought-styles or generate change. It is proposed that debates on structure and agency will remain core to the evolution of NDIT.

2.6 The development of NDIT within the Realm of Risk

2.6.1 Risk & Culture

Douglas and Wildavsky's 1983 book, *Risk and Culture: An Essay on the Selection of Technical and Environmental Dangers* presented Douglas' ideas in relation to the management of risk for the first time. Importantly, it attempts to transpose Group and Grid-derived thought-styles into a theory of risk identification and response. However, there are several elements of the work that proved problematic and were subsequently revised by Douglas, as explained below.

Risk & Culture describes ways in which risk is difficult to understand and the inherent link of risk perception to social organisation. Douglas & Wildavsky propose we cannot know for certain the risks we face; there is no consensus about what we should worry about, to identify and classify a risk requires social order; the true nature of risk can be opaque; assessment of risk is necessarily biased. Most

significantly, Douglas regards risk management and social organization as interlinked, whilst referring to schemes of classification in managing risk:

> Risk taking and risk aversion, shared confidence and shared fears, are part of the dialogue on how best to organize social relations. For to organise means to organize some things in and some things out. (Douglas & Wildavsky 1983, p.8).

Such observations within *Risk & Culture* contribute to the study of risk management, and directly challenge 'rational choice theory' – i.e., that risk taking is driven by calculative choices based on collective best interests. In practice, not all risk taking appears to be based on sound choices and made in an individual or organisation's best interests; the destructive impact of excessive risk-taking on FS firms during the 2008 financial crisis is one such example. By interlinking social organisation and risk management, Douglas also challenges the notion that risk can be objectively identified, measured, and managed – which is a common assumption across firms and industries. Risk identification and appraisal therefore becomes subjective and potentially futile, as is appraisal of risk to the satisfaction of all impacted stakeholders. This is exacerbated by the existence of 'involuntary' or hidden risks that Douglas argues are inevitably unknown or understood by those who may be impacted by them. The subjectivity of risk appraisal could also explain the tendency for scientists and experts to disagree on matters of risk.

Douglas & Wildavsky further venture that risk attitudes and the management of risks are frequently polarised and can become a source of conflict. Douglas acknowledges the difficulty humans have in calculating or agreeing risks, assigning probabilities or mitigation, inferring that to produce a view at all, or at least one that will be more broadly accepted, the individual necessarily resorts to edited worldviews of dominant cultures. In adopting edited views of dominant cultures, the management of risk becomes a way to strengthen coherence between groups of people as they unite in response to a perceived threat.

More controversially however, *Risk & Culture* depicts two dominant thought-styles (rather than the four depicted in NDIT) and these are presented in simplified and somewhat caricatured manner: 'Western social thought habitually reverts to a typology of two, bureaucracy contrasted with the market.' (Douglas & Wildavsky 1983, p.90). These two cultures, hierarchy and individualism, are described as the Centre**.** It is then acknowledged that a reaction to the Centre groups is engendered by dissident self-organising and voluntary (rather than structured around self-preserving norms), group – the Border. The idea of two main thought-styles surrounded by a third are a departure from NDIT and were subsequently reneged by Douglas.

Another controversial feature of *Risk & Culture*, relevant to this study, is the assertion that thought-styles actively influence the prioritisation of risks, i.e., which risks concerns each thought-style the most. Douglas argues that Centre groups (Hierarchism and Individualism) are naturally embracing of 'technology', due to its association with social distinction and the making of wealth, which is a significant theoretical leap. In the main NDIT researchers assert that the framework is not ideational at all – it does not articulate 'what' individuals or groups think but 'how' they think. However, the attitudes of different thought-styles to risks, and how they respond to risks, is likely to continue to be of interest to NDIT researchers.

To summarise, *Risk & Culture* articulated a case for understanding risk perception because of social organisation and potential for culture to supersede 'rational choice theory' in influencing individual attitudes. It also raised the question of whether a singular objective appraisal of risk across societies or organisations is possible. Such application of NDIT is therefore relevant for FS firms that are seeking to evaluate the impact of culture on risk perception. However, several elements of the work, including the Hierarchist/Individualist duality articulated via coarse analogies, the framing of thought-styles as diagnostic 'ideologies', were subject to revision. Indeed, contemporary NDIT researchers agree that *Risk & Culture* was superseded by Douglas' later work *How Institutions Think (1986),* and that Douglas' collaboration with Wildavsky was unduly influenced by Wildavsky's own political preferences. However, through *Risk & Blame* Douglas is able to articulate the inextricable relationship between social organisation and the perception and management of risk, whilst introducing concepts of fear, accountability and blame to explain how social organisation influences understanding of risk. The work remains useful for NDIT scholars in understanding the motivations of individuals and groups in managing risk.

2.6.2 Beyond Risk & Culture

Following *Risk & Culture*, further works were published by Douglas and contemporaries to illustrate how NDIT can be used to explain risk attitudes and approaches to risk management. All of these helped successfully restate and clarify the potential for institutional forces – Group and Grid – to shape individual attitudes towards risk. *Risk Acceptability According to the Social Sciences* (1985) comprised a thorough review of existing literatures that demonstrates that risk perception is inextricable with concepts of justice, safety and morality. Douglas also highlights limitations of psychological appraisals of risk-taking. Similarly, *Risk & Blame (1992)* successfully positions appraisal of risk and the management of

risk as firmly social and political, not a neutral or wholly objective act. Douglas states 'It is impossible to make sense of the concept of risk in the compartmentalised individualistic frame of analysis normally employed' (Douglas, 1992, pg.x). Additionally, *Risk & Blame* directly acknowledges that anthropological theories on risk management presents a challenge to the risk management profession and its favoured paradigm of rational choice (Douglas, 1992). The work maintains that the four Group and Grid driven thought-styles (referred to as 'cultural patterns') are sufficient to manifest different approaches to risk management, though seemingly discounts the potential impact of the Isolate (High Grid; Low Group) thought-style due to their level of disenfranchisement. This appears to be a significant assumption by Douglas in this work - the role of Isolates in FS firms remains to be explored and could be significant. Furthermore, it could be argued that all groups of employees contribute even indirectly to the risk profile of the organisation.

Douglas' later work *The Risks of the Risk Officer* (Douglas, 2013) restates many of her earlier arguments that risk-taking is a social activity, surrounded by moral judgements and trade-offs, and not an act of rational calculation. Douglas argues that risk managers and economic analysts share the same language, assumptions and methods though their thinking and scope of responsibility sits outside of any moral judgements that are required in relation to risk-taking (Douglas, 2013). As such, the role of the Risk Officer within an organisation is presented as somewhat futile in its pursuit to understand and prevent excessive risk-taking. This paper references the work of Hood (1996), who proposed four 'control cultures' as consequents of the four NDIT thought-styles. Douglas concludes from this that none of the four cultural biases are ideally positioned manage risk and evade loss, and none are ideal for controlling risk, particularly as all institutions will necessarily possess a mixture of all four. However, she does concede that the *'safest place'* for a Risk Officer to work is in a Hierarchical environment as this is most likely to precipitate structure, respect for roles and responsibilities and allow them to carry out their duties (Douglas, 2013, pg. 214).

There are some interesting assumptions in this paper that are worthy of exploration in an NDIT study on risk management in an FS firm. Notwithstanding that FS firms share the responsibility for risk management across the executive team, not just a Risk Officer, it remains to be evidenced that risk professionals cannot operate or thrive within a culture that is not predominantly Hierarchical. It seems possible that, in practice, Risk Officers do work in organisations that are non-Hierarchist, and navigate all four NDIT cultures successfully. Douglas also appears to assume that moral and social implications of risk-taking are not part of risk decisions made by Risk Officers or broader executive teams, which is debatable. Furthermore, *The Risks of the Risk Officer* describes a link between risk-taking, risk-appetite

and the development of 'control cultures' – that is, the maintenance of social order in large institutions. It suggests each thought-style develops methods for managing risk that are also designed to control social relations. The relationship between thought-styles and 'control cultures' would merit further investigation as part of an NDIT study into risk culture.

2.6.3 Risk Studies using NDIT & Cultural Theory

Following Douglas' work on NDIT in the context of risk management, other scholars have used NDIT to analyse risk attitudes in a specific context or towards a specific topic. Theoretical assumptions are often present where NDIT has been operationalised in the study of risk, including the nature of the Group and Grid dynamics and thought-styles.

Many studies follow the Cultural Theory paradigm that asserts that 'worldviews' (not thought-styles) have the ability to direct the attention of individuals to specific risks whilst ignoring or downplaying others. This is a departure from NDIT that focuses on ways of organising, not ideational beliefs. Examples of studies using a Cultural Theory are Koehler *et al.* (2018) that examined management of drinking water risks in rural Africa, and Linsley & Shrives (2009) that typified conceptualisations of worldviews to explain the demise of Enron and Andersen due to accounting failure. Kahan (2011) examines risk attitudes on topics including climate change, gun control and pollution across the general population. In a separate study the benefits and risks associated with nanotechnology are explored (D. Kahan *et al.*, 2007). In both studies, analysis focuses on not the Group and Grid scales associated with the NDIT but the four resultant worldviews, leading to the development of 'cultural cognition theory'. Therefore, debate remains on the nature of the four apices in Fig 2.2 and whether these solely represent ways of organising or predispose individuals towards an ideational bias.

Whilst NDIT is not focused on the ideational content of the four thought-styles, NDIT researchers do acknowledge that thought-styles have the ability to align to 'frames' or issues that could be perceived as risks depending on the thought-style. For example, Perri 6 (2006) conceptualises sources of risk perception towards data privacy issues, noting that each thought-style holds different concerns towards the subject which then give rise to perceived risks. Similarly, 6 articulates within a discussion of governmental risk-taking that institutions will take risks that place least strain on or ritually enact their social organization (6, 2014). Therefore, there remains significant scope within NDIT to investigate attitudes towards risk management and risks, without reference to ideologically imbued worldviews.

2.6.4 NDIT and the study of Risk – Conclusion

Douglas and other NDIT scholars have persuasively argued that a social and political explanation for risk cultures, risk perception, and approaches to risk mitigation is necessary. This is made possible by the NDIT model of Group and Grid dynamics and its resultant thought-styles. Research into risk culture has used NDIT to explain the actions and interaction of groups of people towards risk. However, there can be a tendency for typified conceptualisations of the worldviews to be used to underpin the analysis, rather than deployment of the Group and Grid concepts, meaning that researchers in this field should be cautious about the assumptions borrowed from NDIT to analyse risk culture and be prepared to justify them. Whilst NDIT scholars typically do not maintain that NDIT thought-styles inform perceptions of specific risks, this is open to further exploration.

The potential explanatory power in understanding risk culture through the NDIT model appears compelling, and there are many opportunities for additional research in this field.
This conceptualisation of risk as a product of social relations across an organisation, and with its stakeholders, is pertinent to the study of risk culture in FS firms. NDIT enables the interests of individuals, stakeholders and corporations to be accounted for during the risk management process and does not focus solely on psychological bias within leadership decision-making. It helps explain some phenomena evident in the management of risk in FS firms - for example, differing views on the same risks between experts and non-experts, the difficulty assigning calculative unequivocal judgements (particularly to operational risks), and unintentional excessive risk-taking by institutions, such as that leading up to the financial crisis. It furthermore challenges the notion that 'Bad Apples' are commonly at the root of corporate failures across FS firms. However, the two existing NDIT studies in FS firms by Underwood, Thompson, and Ingram (2014) and Thompson (2016) are limited in number and breadth, having focused on credit and insurance risk rather than operational or strategic risk, and employ just one method for data collection. This study extends examination of risk cultures within an FS firm across all risk types and across a large employee population.

2.7 NDIT and Cultural Theory: Important distinctions

It is worth summarising crucial differences between two conceptualisations of Douglas' work: Neo-Durkheimian Institutional Theory (NDIT) and Cultural Theory. This is important because contemporary debates on Douglas' work, and how the theory is used, researched, and the terminology deployed, is centred on multiple different interpretations of Douglas' theory. The two labels for the body of work are often used interchangeably across the literature but signify important differences. 'Cultural Theory'

emerged from the work of Douglasian scholars such as Wildavsky and Thompson and works such as *Cultural Theory* (1992) and *Risk & Culture* (1983), discussed above. Cultural Theory often presents a specific interpretation of the Group and Grid model and resultant 4 thought-styles and argues that these are in effect 'worldviews' that explain the content of ideas, i.e., what people think, and in the study of risk, what they fear.

Perri 6 subsequently devised the term Neo-Durkheimian Institutional Theory (NDIT) to distinguish the application of Douglas' work from Cultural Theory. The difference is subtle; NDIT uses the same typology of four forms but focuses solely on social organisation, which in turn informs thought-styles that influence how groups of people react to institutional circumstances. NDIT scholars argue that Cultural Theory is circular and almost tautological in its premise; it supposes that the four typified worldviews inform the content of smaller ideas including the perception of risk. There has also been a tendency, particularly in Wildavsky's work, to imbue the four thought-styles with political attributes, for example assuming that 'Egalitarians' (Enclavists) are most concerned with 'green' issues.

Both NDIT and Cultural Theory are compelling embodiments of Douglas in their own right. However, this study will remain aligned to NDIT. This is because it is more closely aligned to the foundational concepts of Group and Grid described across Douglas' work. It avoids the circularity associated with assessing the presence of typified worldviews within an institution. NDIT also does not pre-emptively assign ideologies or political attributes to the thought-styles. NDIT appears therefore to be less likely to introduce bias into a study of risk culture within an organisation. The next section will consider how NDIT has been applied to account for risk perceptions across society and within organisations, which is central to the study of risk culture in FS firms.

2.8 NDIT in the context of other Social Cognition Theories

This section justifies the use of NDIT for the study of risk culture instead of other social cognition theories. One issue faced by risk theorists is that fragmentation of the social sciences and number of competing perspectives means that selection of one overarching theory to evaluate risk culture is challenging (Krimsky and Golding, 1992). Therefore, an NDIT-based study of risk culture must be able to explain the advantages of using NDIT as the framework to evaluate how collective consciousness informs risk culture. The section justifies the use of NDIT to explore risk culture by comparing NDIT against two other broad sociological frameworks, namely Bourdieu's Habitus and Social Identity Theory (SIT). The limitations of these highlight why using NDIT to study risk culture is advantageous.

Like NDIT, broad sociological paradigms and meta-theories such as Bourdieu's Habitus also provide a link between the social field, the individual and risk-taking. In the Habitus, a field is a setting (for example, a social environment or an institution), of which there are many, and there may be sub-fields within each larger field. The concept of capital can take three forms – economic (money, assets property), social (access to a network of relationships) and cultural (knowledge and level of education) outlined in *The Forms of Capital* (1985). 'Practice' (what people do) is driven by their position in the habitus, which supposedly provides individuals with predisposed ways of thinking and acting, developed in the *Outline of A Theory of Practice* (1977). Combined, these elements could regulate and normalize risk taking and risk avoidance. Modern researchers have utilized the concept of the Habitus to understand, for example, the causes of risk-taking behaviour in adolescents and to inform successful public health interventions (Pound and Campbell, 2015), to understand the risk of extremism in schools (Stahl *et al.*, 2021), to explain risk-taking in outdoor climbing (Bunn, 2017) and evaluate the development of 'professional logic' in Big 4 accounting firms (Spence and Carter, 2014). It is clear that the Habitus provides a meaningful instrument to explore and explain risk perceptions.

Similarly, Social Identity Theory (SIT) is a framework to determine how social categories are formed and individuals move within them, influencing perceptions and risk attitudes. The theory holds that individuals place themselves into groups based on salient social characteristics such as age, gender, occupation and nationality. The assignment of an individual to a group is thought to be driven by the individual themselves, and the process of identification is psychological, driven by a sense of belongingness to a human aggregate (Ashforth & Mael, 1989). Like NDIT, SIT holds that group commitment and adoption of belief systems can be manages and influenced by deliberate manipulation of 'symbols such as traditions, myths, metaphors, rituals, sagas, heroes, and physical setting' *(*Ashforth & Mael, 1989, p28). SIT-specific studies have provided examples of correlation between social identities and perception of risk. In terms of influencing decision-making, SIT maintains that individuals' decisions can and are influenced by hierarchy, impactful leadership, and additionally through the process of socialization and maintaining continuity. This is evident in Ashforth and Mael's SIT study of Morton Thiokol, the manufacturer of the faulty solid rocket booster that led to the 1986 crash of the space shuttle *Challenger*. A senior engineer of the company helped reverse a decision not to launch the Challenger when he was asked to "take off his engineering hat and put on his management hat" *(Presidential Commission, cited in Vaughan, 1986, p. 23;* (Ashforth & Mael 1989, p.30). This example highlights that responses to risk taking may be driven by identification to groups, institutional roles and their typical behaviours and norms. Additionally, Frank, Eakin and Carr, via case studies of coffee producers

responding to climate change risk, propose that social identity plays an important role in determining responses to risk and consumption of risk information (Frank, Eakin, & Lopez-Carr, 2011).

However, there are some defining features of NDIT that differentiate it from Habitus and SIT theories and increase its relevance for risk research within organisations. Firstly, Douglas is very clear that collections of individuals create mindsets, rather than the environment possessing an intrinsic quality that organizes individuals. Therefore the theory can then account for the relationship between individual cognition and organizational culture, and helps to explain how individuals themselves shape culture, which is less substantiated in Habitus or SIT. Secondly, the concepts of Group and Grid underpinned by concepts of classification and ritual, whilst open to further exploration, provide a tangible explanation of how organizational forces are engendered and perpetuate. At the same time, Group and Grid are innate and universal across all social organization, rather than contingent to a social setting or habitus, and therefore NDIT is in theory unrestricted in the contexts to which it can be applied.

Whilst NDIT is relevant to the study of rsk, it is not solely a theory of *risk-taking* for individuals and groups. It is broader than that. As a theory of organization, cultural bias, interaction between groups, and protection of group-mindsets, NDIT provides a framework for understanding how groups of people perceive risks, risk responses, risk mitigation, risk communication and how and why these differ considerably. This further extends the use of NDIT beyond that of the Habitus or SIT. NDIT helps to explain the reaction of groups of people towards risks, including whether they consider them to be manageable and in what time frame. The overview of thought-styles in Fig 2.3 provides insight to the way in which each thought-style could respond to risk or threats, and how they might organise to mitigate risk according to their typical characteristics and ways of seeing the world. This is a useful basis for researching, identifying and classifying risk cultures in an FS firm.

NDIT is also differentiated from Habitus and SIT by its ability to explain reflexivity and organisational dynamics. The functionalist foundation of NDIT maintains that the perception of risk for a particular thought-style will be (at least partly) informed by the viewpoints of other thought-style. This facilitates an understanding of risk cultures, cohesion, and conflict within an organisation. As NDIT acknowledges that thought-styles interact, and individuals belonging to each thought-style may realign to another thought-style if dissatisfied, it is able to explain changes to cultural mix over time – another distinct advantage over the Habitus and SIT.

2.9 Literature Review: Conclusion

Douglas' NDIT literature and broader body of anthropological work provides a rich and compelling framework to analyse risk culture in an FS firm. The model is transferable to any social or political context, underpinned by tangible social phenomena such as Group and Grid and classification and ritual, which facilitate analysis of culture in an organisational setting. NDIT researchers vary in their interpretation and application of the theory, and virtually every element – its theoretical foundations and how it is best utilised – is subject to review.

Therefore, there are multiple opportunities to revisit and clarify various theoretical elements of Douglasian theory and how it can be applied to understand risk culture in a large organisation. This study revisits the foundational concepts of Group and Grid, and the role of Douglasian themes of ritual and classification in NDIT. A significant amount of prior research has utilised NDIT to demonstrate the link between institutional ordering and risk perspectives. However, there is an opportunity to further characterise and explore the four thought-styles as risk cultures. This includes understanding how each thought-style responds to specific risks, risk management frameworks, risk communication, and navigates risk decisions. In doing so, this study will identify areas of commonality and conflict between risk cultures, which again will add depth to the current body of literature on NDIT. The existing literature also does not include large-scale studies into risk culture using NDIT across FS firms, which this study will address. The FS Regulator and FS industry bodies may benefit from understanding risk cultures using NDIT, and its ability to explain diverse and divergent perspectives within an organisation, and NDIT has had limited application in this field to date. There is also limited exploration of the normative implications of multiple NDIT thought-styles, or risk cultures, in a large FS firm, which this study will seek to evaluate.

The research methodologies used across NDIT studies vary according to the requirements of the study and the researcher's interpretation of the theory, which is the focus of the next chapter. Chapter 3 argues there is a clear opportunity to improve upon NDIT research methodology utilised in previous studies, and that are significant advantages in adopting a mixed method approach to study risk cultures within an FS firm.

CHAPTER 3: NDIT Research Methods & Research Design

3.1 Introduction

The aim of this research is to identify the risk cultures present in a UK Insurer, using NDIT, and understand the implications of these risk cultures for the management of risk within the FS sector. Additionally, the study will examine how the risk cultures compare under three research methods commonly employed in NDIT, and finally, evaluate implications of the results for how NDIT is conceived. In order to achieve all three research aims, this study adopts a mixed method approach that combines a quantitative survey methodology triangulated with qualitative data. The purpose of this chapter is to evaluate the research methods utilised by previous NDIT research and justify the methodology used in this study.

The first two sections of this chapter, sections 3.2 and 3.3, comprises a discussion of research philosophy, paradigms and methodologies with a view to selecting a suitable approach for this study. Next, section 3.4 reviews research methods used across existing NDIT studies, both qualitative and quantitative, focusing on their relative strengths and weaknesses so that opportunities are identified to refine NDIT research methodology. Section 3.5 chapter sets out the specific research methodology for this study, followed by an explanation of how the data has been analysed in section 3.6. Finally, section 3.7 considers the ethical implications of conducting research in the UK Insurer, and the researcher's own positionality as a senior-level employee, in section 3.8.

3.2 Research Philosophy

To develop a research methodology a research philosophy must first be established. This is crucial in determining how information should be gathered and interpreted, and to understand what could support or undermine the validity of obtained data or conclusions of the study. The researcher's position varies according to the research philosophy adopted. To support the development of a research approach for this study, this section discusses key topics in research philosophy – specifically the contrasting paradigms of functionalism versus positivism and idealism versus interpretivism.

In social sciences, alignment to research philosophy is shaped by debates around ontology and epistemology (Easterby-Smith et al. 2015) (Johnson and Duberley, 2011). Ontological matters centre on

the nature of reality, specifically, the continuum between realism (that there is an external reality that can be accessed by research) and interpretivism (that reality is comprised of experiences and events reported by humans) (Bryman, 2012). Similarly, from an epistemological perspective, consideration must be given to a continuum between positivism (that the social world can be measured through objective methods, like the natural world), and social constructionism (that reality is not pre-existing but is generated and refined by peoples' experiences) (Creswell and Plano Clark, 2007). These philosophical positions inform 'paradigms' for organisational research and interpretation.

Descriptions of research paradigms vary considerably across the literature. However, for NDIT research it is useful to acknowledge contrasting paradigm positions of positivism versus functionalism and idealism versus interpretivism. These paradigms are foundational ways of characterizing and providing a frame of reference for analysis of social science and organisations. In terms of research, the functionalist paradigm assumes that independent forces shape and regulate organisations, akin to Durkheim's functionalist theories, and that organizational behaviour can be rationally explained (Hassard, 1995). A positivistic, quantitative data-driven research approach (for example, using a quantitative survey instrument) could therefore be adopted to capture and measure social forces. By contrast, taking an idealistic and interpretivist approach assumes that the organization is best understood through human experience (Bryman, 2012), and usually involves participation of the researcher in the organizational area of study – for example, through participant observation or interviews. Both are valid potential approaches to NDIT research depending on the aims of the study and perspective of the researcher, though the interpretivist approach might limit generalizability of findings.

A similar, yet alternative distinction has been proposed by Burrell and Morgan (1979) – ideographic versus nomothetic methodologies. A nomothetic deductive approach to research involves rigorous scientific tests and quantitative techniques for the analysis of data. The ideographic methodology involves '…getting inside situations and involving oneself in the flow of everyday life…' (Burrell & Morgan 1979, p.6). This distinction is significant for a researcher and their proximity to the organization in focus. Situated within an organization, a researcher may adopt ideographic methods to leverage first-hand knowledge. Through inductive reasoning – where general principles are inferred through analysis of specific cases – a researcher can evolve (not just test) existing theories. Again, both paradigms could provide valuable data as part of NDIT research, such as large-scale assessment of cultures or in-depth perspectives on a particular issue, depending on the aims of the study.

However, the distinction between these opposing paradigms is not rigid and there are opportunities for researchers to combine approaches or adopt multiple ones. For example, by evaluating the interplay of organizational dynamics in a focus group setting. Whether positivistic or idealistic, using deductive or inductive reasoning, or a justified combination of both, the selected paradigm informs the type of data collection. This is the focus of the next section.

3.3 Overview of Research Methods

This section summarises typical methods for quantitative, qualitative and mixed method research and typical strengths and weaknesses in producing results. It also considers how information obtained by each method can be interpreted and inform action. Such a discussion will support a discussion of NDIT research methods in section 3.4 and research design for this study in section 3.5.

3.3.1 Quantitative Research Methods

Quantitative research methods are typically used to evaluate hypotheses, assess relations between an independent and dependent variable in a population, and explore 'why' social phenomena exists (Creswell and Plano Clark, 2007). Quantitative data is numerical and is usually gathered by surveys and databases, though can also be obtained via coded observational methods (involving some degree of interpretation by the researcher) (Easterby-Smith et al. 2015). Quantitative data involves conceptual measurement between variables and is therefore concerned with the notion of reliability (consistency of a measure) and validity (that the indicators to measure a concept really do so) (Bryman 2015). Quantitative research is also concerned with results reproducibility. Deductive reasoning is generally associated with quantitative methods, where the researcher *"works from the 'top down', from a theory to hypotheses to data to add to or contradict the theory"* (Creswell & Plano Clark 2007, p.23), however a feedback loop from the results to the theory also allows for inductive reasoning (where generalisations are drawn from individual cases) and improvement of the theory (Bryman 2015). Advantages of quantitative research are that existing theories can be tested in a logical and linear fashion, across a large sample size, with the possibility of a feedback loop to further refine the theory.

One of the key challenges with quantitative analysis is the level of breadth and depth of insight that it provides. Specifically, quantitative data may, by itself, provide a superficial analysis of social phenomena. It cannot, for example, understand the meaning that individuals associate with a particular concept, or how it shaped by perceptions and experiences; it may also fail to capture the complexity of a

specific phenomenon. The implications for action following quantitative, positivistic research may not always be obvious (Easterby-Smith et al. 2015), which is a key consideration for organisational studies such as researching risk culture in a FS firm.

3.3.2 Qualitative Research Methods

Qualitative research methods are used to explore the nature of a phenomena or concept, gathering in-depth insight via the participants or subject (Creswell and Plano Clark, 2007). Qualitative data is gathered in a non-numerical manner, using for example, language, text, interpersonal observation and interaction. Qualitative analysis can be performed from texts, for example in a coded and statistical fashion, or via direct interpretation (Eriksson & Kovalainen 2016). It can also be sought from case studies (defined real life empirical studies), ethnographic research (first-hand experience of a culture or organization), phenomenology (examination of multiple lived experiences), grounded theory research (using data from a field to construct new theories) and narrative research, which utilizes and examines storytelling (Miller and Salkind, 2002). Qualitative research is broadly inductive and interpretivist in nature, focusing on evaluating social phenomena by examining interpretation of the world by its participants. (Bryman 2015). Qualitative research can be conducted in an exploratory fashion, which may inform or refine existing theory, or create new understanding; it has emergent flexibility (Schreier, 2012). A key advantage of this method is that the data collection and analysis is sensitive to the social and cultural context of the research and facilitates a more in-depth and rounded understanding of the topic (Kovaleinen & Eriksson 2016). A researcher can also adjust the data collection process as new information and ideas emerge (Easterby-Smith et al. 2015).

There are also challenges associated with qualitative research. Qualitative research methods have been critiqued for introducing bias (on behalf of the researcher) (Hammersley and Gomm, 1997), being less likely to follow a valid research structure or deliver robust theoretical explication of meaning (Miller and Salkind, 2002), or being unable to demonstrate generalizability beyond one context (Johnson and Duberley, 2011). Standards of rigour therefore must be balanced with the creativity and flexibility offered by qualitative methods (Russell & Morse 2006). Gathering and interpreting data can also prove time and resource-intensive for the researcher (Flick, 2011).

3.3.3 Mixed Method Research

Despite clear distinctions between quantitative and qualitative methods, not all research considers there to be an insurmountable dichotomy between them. For some, the distinction is unhelpful; it may distract

from potentially useful research options such as statistical induction and development of hypotheses from rich and detailed data (Wood & Welch 2016). Putting aside theoretical distinctions between quantitative and qualitative methods, the next section explores how the benefits of both methods can be leveraged, and weaknesses mitigated, as part of a mixed method approach.

Mixed methods research - utilizing both quantitative and qualitative methods – is increasingly regarded as a way of improving the validity and generalizability of research. Blaikie (2010) outlines factors contributing to the increased acceptance of mixed methods research, namely that quantitative methods are no longer dominant, qualitative approaches have been refined, notions of objectivity and subjectivity have evolved, and the emergence of more pragmatic attitudes towards research (Blaikie 2000). The field of mixed method research remains in development via discourse amongst reputed researchers (Tashakkori and Creswell 2007). There are several advantages to a mixed method approach: corroboration of data between qualitative and quantitative outputs, elaboration or enhancement of results from another source, discovery of paradox and contradiction, and to extend breadth and depth of enquiry (Bryman 2006), and simultaneous exploration of multiple research questions (Tashakkori, Teddlie and Johnson, 2020). Mixed methods are frequently able to identify contradictions in theory by integrating inputs, identifying that simple claims are more complex than previously thought (Hitchcock, Onwuegbuzie and Schoonenboom, 2022).

Application of mixed methods can be varied, with four distinct practices. First, *triangulation*, where more than one type of data is compared, data is transformed from one type to another in the analysis phase or using different methods at various levels of the organization (Blaikie 2000). Second, mixed methods can also be *embedded*, where one type of data plays a supplementary role. Third, *explanatory*, where quantitative data is explained by qualitative phases (or vice versa), and finally, *exploratory*, where qualitative phases are utilized to shape subsequent quantitative study for example by informing survey questions (Creswell & Plano Clark 2007). Martin (1992) successfully conducted research into organisational culture using mixed methods, noting that the quantitative phase of the study were used to assess hypotheses derived during the initial qualitative phase, and prevented externally derived indices of culture from being superficially applied to the surveyed population. This had the effect of reducing bias into Martin's work.

Whilst the benefits of a mixed methods research approach are varied; the approach must be justified against the aims of the research study. Therefore, the research strategy must detail which elements of the research aims and questions will be further validated, for example by offsetting shortcomings of either qualitative or quantitative research, or through corroboration (for example via triangulation) of insights.

Decisions relating to the priority of methods (the extent to which they have equal weight) and sequencing (which method precedes which) must also be made to ensure the research mechanisms are aligned to the research outcomes (Morgan 1998). It may be that mixed methods may help evaluate unexpected findings and allow for some fluidity and reflexivity in the research process (Bryman 2015). For example, this could be by conducting interviews to explore an unexpected result from a quantitative survey.

Mixed methods research comes with a set of challenges. Some of these are practical requiring more time and resources (including a wider range of competencies (Bazeley 2019) than when relying solely on quantitative or qualitative approach (Johnson & Onwuegbuzie 2007). In turn this necessitates careful planning and justification of research phases (Stockman 2015). Moreover, methodological challenges may arise. For example, attempts at triangulation of data sources (for example, comparison of quantitative and qualitative results) can lead to irregularities and confusion, particularly if the researcher is not sufficiently clear on what exactly both results are measuring (Brewer & Hunter 2006). The quality and transferability of inferences gathered via mixed method research can also be unclear (Tashakkori, Teddlie and Johnson, 2020). Another challenge is aligning mixed methods research against ontological paradigms to justify the significance of the research, which is discussed in the next section.

3.3.4 Paradigms and Mixed Method Research

The relationship between research methods and research paradigms is subject to debate. It has been traditionally argued that quantitative methods support a positivist paradigm of measurement and objectivity, and qualitative methods support an interpretivist and idealist paradigm. Some researchers maintain that paradigms are incommensurable (Burrell & Morgan 1979) (Jackson & Carter 1991), which leads to the assumption that quantitative and qualitative methods are not compatible. However, increasing support for mixed methods in recent decades is underpinned by the view that as it is not necessary to enforce a dichotomy between quantitative and qualitative methods or paradigms.

To address paradigm incommensurability whilst helping to frame the value and challenges underpinning mixed methods, researchers have turned to pragmatism (Bazeley 2019). Pragmatism focuses on the 'practical consequences' of data, beliefs, and actions in determining value, meaning that research outcomes may be regarded as 'warranted assertions' rather than facts (Bazeley 2019). It also allows for experiential learning (Kolb, 1984). The popularity of pragmatism as a mixed methods paradigm appears to be increasing (Johnson & Onwuegbuzie 2007), including in the field of organisation studies and management research (see for example Lorino 2018, Statler and Salovaara 2017, Brierley and Ja 2017).

There are several tenets underpinning pragmatism which are favourable to the mixed methods researcher. For a start, it sidesteps traditional dichotomies reflecting that knowledge can be both external and constructed, arguing instead that multiple kinds of reality exist which can be shaped by enquiry across different scientific disciplines (Tashakkori, Teddlie and Johnson, 2020). Then, it embraces fallibility in knowledge and allows for the potential for it to alter over time (Johnson & Onwuegbuzie 2007). Also, pragmatism utilizes transferability to consider the implications for the research and allows researchers to investigate the factors that determine whether insight can be transferred to other contexts (Shannon-Baker 2016). It does this by utilizing abductive reasoning - moving between induction and deduction - to enable practical application and verification of theory (Morgan 2007a).

However, like other paradigms, pragmatism attracts criticism. Because it tends towards 'what works' pragmatism could be considered relativistic in nature (Howe 1988). Furthermore, its emphasis on 'value' and 'usefulness' could be described as subjective (Goles & Hirschheim 2000). Nevertheless, pragmatism is an attractive approach for researchers that strive to bridge the gap between theory and tests of practice.

3.3.5 Measuring Culture

In order to design an appropriate research method for a study into risk culture, is it worth considering whether culture can indeed be measured, and what assumptions underlie the measurement of culture. The measurement of organisational culture has been attempted multitudes of times, using varying concepts of culture and survey instruments; notable studies include Wagner and Moch (1986), Trompenaars (1993), and House et al (2004). However, as identified by Martin (2001) Taras (2009) and Mohr and Ghaziani (2014), there remains no consensus on the underlying attributes of culture or how it should be measured.

The measurement of culture presupposes that culture possess certain qualities – it must maintain a level of short-term stability, consistency across a sampled population, and manifest as a group phenomenon rather than just experienced by individuals. However, not all studies into culture affirm these qualities. For example, Martin (1992) proposes that organisational culture can be 'Differentiated', characterised by its inconsistencies and conflicts, or 'Fragmented', defined by ambiguity and dichotomy. Such conceptualisation of culture presents further challenge for researchers to develop attributes of culture and then set procedures for measuring it. Where culture is measured, the methodology leans towards setting and measuring quantitative indices that focus on observable layers of culture, sometimes without generating results that demonstrate the accuracy and validity of the instrument (Taras, 2009). There is also a risk of participant bias in self-reported questionnaires, which are typically used. The possibility of

measuring culture via qualitative approaches or via observed behaviour appears to be under-explored. Such studies could provide greater insight into unique attributes of an organisation's culture, but would limit generalisability of findings and opportunities for comparative study.

Notwithstanding the evident challenges in reliably defining and measuring organisational culture, it is argued that NDIT provides an established theoretical framework for stratifying and describing culture, and can be therefore used to achieve the aims of this study into risk culture in a UK FS firm. Furthermore, several prior studies have used NDIT to describe the culture of organisations, using a range of methodological approaches. Such studies have produced results with varying levels of reliability and validity. Not all NDIT studies have yielded convincing results, meaning there is opportunity for development and refinement of both the underlying theory and the research methodology. The next section will explore the research methods used for NDIT studies to date, considering the relative strengths of quantitative, qualitative and mixed methods research explained above.

3.4 Research Methodologies employed in NDIT studies

A variety of research techniques have been employed as part of NDIT studies. Common are quantitative methods in support of positivistic analysis, and qualitative data is often used interpretive or explanatory analysis. The next section summarises and critiques each NDIT research method, with reference to individual studies, helping to inform the paradigm and methods for this NDIT study into risk culture at an FS firm.

3.4.1 NDIT Quantitative Research Evaluated

NDIT studies have historically often utilised quantitative surveys, and as argued below, have evidenced the relationship between NDIT thought-styles and risk attitudes with moderate success. The effectiveness of quantitative instruments for NDIT studies is also somewhat mixed, providing further opportunity to revisit quantitative methods to enhance the reliability of results in NDIT studies. This section sets out and evaluates key quantitative research approaches for NDIT.

3.4.1.1 Quantitative Measurement of Worldviews

Dake & Wildavsky in *Who Fears What & Why?* (1990) used a quantitative approach to support the claim that NDIT's elementary forms influence perception of risk. Their study attempts to demonstrate that worldviews have a greater influence on risk perception than other variables including knowledge of a risk type, personality type, economic status, political leanings, and national culture. The authors establish

alignment to one of the four worldviews by gathering responses to specific questions (rated via a Likert scale), whilst also asking for participants' responses to specific types of risk. This study is significant as the survey instrument has frequently been re-used in subsequent NDIT research. It is distinct in that is measures respondents' alignments to the four 'worldviews' and not Group or Grid dynamics. The Dake & Wildavsky survey instruments can be found in *Appendix 1*.

Dake & Wildavsky's survey instrument has been re-used in wide range of studies across wide range of disciplines. This includes Kahan's study of Gun Control attitudes (Kahan 2003), and risk perceptions of Nanotechnology (D. Kahan et al. 2007). Brenot, Bonnefous and Marris' (1998) used the survey instrument to evaluate worldview correlation to social and economic risk perception. It has been used to understand public perception of risk - namely public perception of American foreign policy (Jenkins-Smith et al. 2012), and to establish how cultural biases shape political views (Olli, 2009, 2012). It has also been used to test risk attitudes amongst insurance executives (Underwood, Ingram et al. 2014). Underwood and Ingram's survey additionally correlates NDIT thought-styles with four risk management attitudes – i.e. how risk should be managed rather than attitudes towards different types of risk – referred to as 'Plural Rationality Theory' (Underwood et al. 2014, p.45). The breadth of risk attitudes is then used to discuss the appropriateness of traditional Enterprise Risk Management models.

The design of Dake and Wildavsky's questionnaire can be challenged on a theoretical basis. The questions ask participants to respond to statements that are inherently political and philosophical – for example, whether they are in favour of additional tax burdens. Whilst this type of question will reveal something about an individual's cultural influences, or 'ideologies', it does not reveal anything about how institutions operate. As explained in Chapter 2, NDIT is strictly a theory of institutions and how people organise, not what they think about specific topics. The theoretical validity, or 'content validity' of NDIT survey instruments has been challenged by current NDIT researchers (for example Swedlow, Ripberger et al. (2016)) but no definitive proposal has been offered on how to address.

Additionally, Douglas commented on the introduction of bias in instruments to measure worldviews in *Being Fair to Hierarchists* (Douglas, 2013), suggesting the researcher's own 'moral biases' slip into the analysis and design of questions designed to capture each of the four worldviews (Douglas, 2013). She then raises doubts about whether the results effectively capture each thought-style. Such feedback from Douglas is useful as it reminds NDIT researchers that their own biases are liable to influence setting research methodology. It is also suggested that Douglas had some doubts about the questions derived by Wildavsky and Dake to identify each thought-style, and because of the flaws in Dake and Wildavsky's

research design, this provides further impetus for NDIT researchers to explore alternative methods for NDIT research.

3.4.1.2 Quantitative measurement of Group and Grid

One way of reducing circularity and bias in quantitative NDIT studies is to define and set attributes for Group and Grid, and then design a battery of questions to measure each dimension. This approach has been adopted by only a small number of researchers, which is perhaps surprising, given the centrality of these concepts to NDIT. Hampton and Douglas (1982) attempted an operational definition of Group and Grid dimensions and administered two separate surveys to 80 and 100 professionals, where respondents were asked to score the indices. These surveys elicited mixed part-whole correlations (against Kendall's tau), and the Grid indices were stronger than for Group. Gross & Rayner (1985) followed with a different articulation of the attributes or 'predicates' of Group and Grid, a summary of which is included in *Appendix 2.* Gross & Rayner were particularly interested in the presence of social networks across the Group and Grid concepts, which are evident in the predicates. Such proposals from Hampton and Gross & Rayner whilst intricately founded in Douglasian theory, are untested. This is possibly due to the complexity of the research design and data analysis process proposed.

A small number of researchers have successfully incorporated Group and Grid concepts into survey design, however. Rippl (2002) uses a set of questions that are correlated to Group and Grid, rather than the four thought-styles. The responses are then used to infer the thought-styles of individuals, depending on their degree of alignment to these concepts. Kahan, Jenkins-Smith et al (2015) deployed a survey instrument that assesses relational patterns (orientated around Group and Grid) rather than stylized worldviews. This research asks respondents to rank a description of the four worldviews in order of preference as well as rate worldview-aligned statements. Asking respondents to rank worldviews in order of preference may introduce psycho-social bias but could provide some insight into the relationship between relational patterns and worldview preferences. Boyle & Coughlin (in Coyle & Ellis 1994) perform a study across university students using questions that purport to measure Group and Grid. The questions centre around preferred parenting styles, workplace type and relationship styles. The responses to these questions are then correlated to Dake's worldview questions to reveal that different combinations of Group & Grid produce different biases. However, this approach does not reveal much about the link between relational patterns and worldviews, as the Group and Grid questions reveal personal preferences rather than experiences of a particular organisational context. The importance of situating the survey instrument within a specific context is argued in the next section.

Measuring Group and Grid as part of NDIT research, rather than measuring the four worldviews as part of Cultural Theory research, is not without its challenges. There is an inherent difficulty in accurately identifying and explicating the complex concepts of Group and Grid across the Douglasian literature, as explored in Chapter 2. Maleki & Hendrik (2015) highlight that this task is not straightforward and are critical of the predicates proposed by Gross & Rayner (1985) to inform Group and Grid question development. They also question the fundamental attributes of Group and Grid. For example, they query whether 'trust' is always aligned to 'Group' (Maleki & Hendriks 2015, p.262), or 'voluntary involvement' (Maleki & Hendriks 2015, p.259). Similarly, concepts of 'power distance' and 'religiosity' are also debated in relation to Grid (Maleki and Hendriks, 2015, p. p263-264).

Another challenge associated with the measurement of Group and Grid is the level of consistency and validity attributable to the survey instruments in the examples discussed above. As with previous studies that measure worldviews, a high degree of internal consistency – i.e., as measured by a high Cronbach's alpha score – has not been demonstrated by survey instruments that measure Group and Grid. In some instances, the alpha is low for either the Group or Grid questions, or consistency is simply not assessed by the researcher. For example, Rippl explicitly rejects Cronbach alpha measurement of their Group and Grid questions, since their study examines the structural relations between Group and Grid concepts rather than the validity of the questions, and uses confirmatory factor analysis to assess alignment of the question responses to the four worldviews. (Rippl, 2002). However, it can be argued that both Cronbach alpha measurement and confirmatory factor analysis should be used in parallel to assess the efficacy of Group and Grid as latent underlying variables.

Considering the above, it can be argued that questions that measure Group and Grid concepts rather than worldviews has advantages as it helps mitigate issues of bias and circularity in the research design and allows for some commonality across neighbouring worldviews. However, regardless of whether NDIT measures the four thought-styles by adopting a variant of Dake and Wildavsky's questions, or use questions to measure Group and Grid, previous research highlights that there are several challenges that quantitative NDIT studies must be able to mitigate. These are explored in the next section.

3.4.2 Challenges for Quantitative NDIT research

The below section summarises key challenges evident in designing an appropriate quantitative measurement tool for NDIT, drawing on the strengths and weaknesses of prior research. This is then used to inform the design of the survey instrument used in this study.

3.4.2.1 Question design and internal validity

As explained in the previous section, when designing NDIT survey questions, researchers generally have not adequately detailed the 'attributes or 'predicates' from Douglasian theory and how they inform survey instruments - i.e., what assumptions are made about the nature of Group and Grid and / or the resultant thought-styles that guarantee that the questions capture that attribute. This is particularly problematic for the Dake & Wildavsky questionnaire *(Appendix 1)* that, it can be argued, measure four ideological standpoints, which do not clearly relate back to underpinning Douglasian concepts. In this sense, the survey instruments have not been validated against the premises of NDIT.

Furthermore, not all survey based NDIT research incorporating worldview scales have satisfied traditional measures of consistency and reliability. Meader (2002) compares the Cronbach's alpha scores for the four worldviews across different studies, including work by Brenot Bonnefous & Marris (1998), Palmer (1996), Peters & Solvic (1996), and Sjoberg (1997). All these studies incorporate questions from Dake's original work (though some questions were dropped). The alpha scores range between 0.37 to 0.77, and just five of the 18 sets of questions reached traditional levels of reliability (Cronbach alpha score of >0.7) (Easterby Smith et al, 2015). Further, Olli's work on cultural bias and political views elicited consistency scores of between 0.56 and 0.65 and adopts an acceptable level of reliability of >0.6 for research purposes (Olli, 2012).

Low alpha scores suggest there is a lower likelihood that the question set is measuring common underlying attributes and, therefore, is less likely to be fully capturing an underlying social construct. However, Wouters and Maesschalk (2014) designed an alternative set of questions to measure the four worldviews within an organisational context and obtained alpha scores of over 0.7 for each thought-style. This highlights that there are opportunities to re-construct NDIT survey questions to improve the internal reliability of the instrument.

3.4.2.2 Ensuring relevance of survey instrument to audience and context

Quantitative NDIT research must also be able to deploy questions that are meaningful for the sampled audience and context. For example, Brenot's study highlights that thought-style and risk correlation in their study is low (6%); this leads the author to question whether analysis at a national level is meaningful, even with a representative sample. Unsatisfactory levels of correlation between thought-styles and risk attitudes could be due to the level of diversity across respondents which increases the potential for different interpretations of the same questions. Furthermore, Verweij, Luan, & Nowacki,

(2011) highlight that it is possible for individuals to possess 'multiple selves' and display context-specific attitudes, which means that questionnaires that contain questions that gauge an individual's general attitudes (like Dake's) may generate different responses depending on the individual's environment. One way of mitigating this is to design survey questions that clearly relate to a specific context, for example, work or home. Consequently, it could be argued that NDIT research within an organization, such as the UK Insurer, the site for this research, has the advantage of providing a more concrete context for survey questions, and by using commonly understood language and terminology appropriate to the context this can reduce the possibilities of multiple interpretations of questions. Underwood & Ingram (2014) developed survey questions for insurance executives (*Appendix 3)* that relate to a specific context. The questions correlate to the four thought-styles and focus on values about the insurer and about the industry, rather than individual behaviours or the firm's ways of organizing. The questions are location and temporal-specific, which improves relevance of results to the insurance company being studied.

3.4.2.3 Measuring culture and not just individual views

Other researchers have contested that quantitative NDIT surveys depict an 'epistemologically individualist' perspective (Tansey & O'Riordan 1999, p.83), which may be at odds with the functionalist roots of NDIT. In other words, it could be that quantitative surveys simply reflect the views of multiple individuals rather than an underlying culture. It is more difficult to demonstrate that culture is being measured in the case of broad public surveys such as those conducted by Dake (1992), Brenot et al (1998), and Olli (2021), where samples are drawn from disparate social contexts. Using quantitative surveys to measure culture also relies on the assumption that individual responses are shaped by social interactions and 'culture' and in turn, further shape culture. Therefore, it is incumbent on the researcher to ensure they are confident their research design reveals something about an institution's unique culture, rather than the sum of individual perspectives. Researchers could ensure this by restricting the context of the study and supplementing a quantitative survey with qualitative methods to provide insight on cultural dynamics.

3.4.2.4 Quantitative NDIT research – a summary

To summarise, previous NDIT research highlights several challenges associated with quantitative survey methods which will be considered and mitigated in this study. To increase the likelihood of a quantitative survey capturing either the NDIT thought-styles or Group and Grid dynamics, it is imperative that NDIT studies clearly articulate the assumptions or 'predicates' that link the questions to the underlying theory. It is also argued that measuring Group and Grid rather than the four thought-styles is more closely aligned to NDIT theory. It focuses on ways of organising and not ideology, removes the risk of circularity, and

reduces researcher bias in creating the questions. The context of the research should be clearly defined and segregated (for example, within the confines of an organisation) to reduce the possibility of multiple interpretations of questions and language across multiple social contexts. It is also desirable to enhance the value of quantitative data and ensure that it truly reflects institutional culture and not the perceptions of individuals, through the addition of qualitative research. The survey instrument design for this study addresses each challenge associated with previous studies described above; this is further detailed later in section 3.5.3.

The next section will explore the advantages of qualitative and mixed method NDIT research, and its respective challenges.

3.4.3 NDIT Qualitative Research Evaluated

Qualitative research has an advantage over quantitative research in that it can demonstrate how thought-styles manifest in specific contexts and interact over a period, thereby allowing the functionalist and dynamic aspects of Douglasian theory to be examined. Through qualitative analysis, NDIT can enhance understanding of organisations, decision-making, conflict, and problem solving. NDIT qualitative research typically takes the form of case studies, focus groups and interviews. Examples from existing NDIT literature are examined below.

Examples of case study NDIT analyses are numerous, as it has frequently been used as an explanatory tool across the domains of comparative politics, political theory, international relations, public administration, and environment and health management. Perri 6 has conducted extensive work on political judgement, where NDIT is used as a mechanism to explain policy decisions in British and American governments during the mid-20th century (6, 2014). Additionally, *Explaining Political Judgement* (6 2011) offers case study analysis of the Khrushchev, Castro and Kennedy regimes. Hartmann & Hengstermann (2014) use NDIT to provide a framework to understand the 'wicked problems' inherent to urban planning (i.e., conflicting public opinions). Linsley & Shrives (2009) use NDIT and functionalist interaction of worldviews to explain the role of established cultures in contributing to Enron's demise. It is evident that the broad explanatory potential of NDIT is attractive to social, economic and political theorists as an alternative to other theoretical frameworks and to unite traditionally disparate disciplines around a singular framework.

Case study analyses using NDIT possess a shortcoming associated with qualitative research, namely limited proven generalizability of findings. The universality of NDIT is a central claim of Douglas, and it is more difficult to explore broader implications of the theory itself via case studies. Researchers appear to utilize NDIT as an explanatory tool without necessarily challenging or refining the NDIT framework. There is also a risk that case study research seeks to demonstrate broad applicability of NDIT but selects examples with compelling evidence of the interplay of thought-styles, whilst de-selecting others. The conclusions obtained via case study analysis will also be influenced by the opinion, knowledge and specialism of the researcher, and access to relevant artefacts and data.

Focus group and interview research is less common in NDIT studies, although several studies have utilized them as part of a mixed methods study (Jordan & O'Riordan 1997; Manzi 2006; Marris et al. 1998; Bellamy & Hulme 2011) and as qualitative standalone research (West et al. 2010). As part of mixed methods research, focus groups have been employed in an 'exploratory' capacity to verify the results of quantitative (survey) methods, or as a way of providing additional definition to thought-style perspectives and relations. For each of these NDIT focus group-based studies, participants were either asked specific questions about risk perception and risk mitigation approaches or provided with statements to discuss. West et al (2010) conducted three focus groups across the UK as part of a study on risk perception relating to renewable energy. Participants were selected following a survey to assess their thought-styles, and the focus groups were arranged so that the thought-styles did not mix. The study utilized a framework of 'worldview characteristics' proposed by Thompson and Schwarz (1990) that serves as an interpretive tool to analyse responses and add a degree of consistency with other studies. The focus group responses were coded against these attributes, generating a generalized view of attitudes towards renewable energy. It is possible that some richness of insight might have been lost by quantitative coding of responses.

To summarise, case study analysis has been employed to evaluate recent and historical decision-making, with an emphasis on understanding how thought-styles contribute towards conflict, failures and solutions in a functionalist manner. Focus groups and interviews provide additional insights to thought-style perspectives, as part of a stand-alone study or as part of a mixed methods approach, but the qualitative data obtained is often turned into quantitative depictions of the sampled population which could lose some richness of insight.

However, there are additional opportunities to use qualitative data as part of NDIT research. For example, focus groups and interviews could play a greater role in investigating the dynamic interplay of

thought-styles within an organisational setting. It would be productive to observe participants with different NDIT worldviews discussing a particular topic or problem to understand how the four thought-styles debate, influence, and make decisions in 'real time'. This would help to assess the normative implications of NDIT within an organisational setting or social group, which is often absent from NDIT studies. Johnson & Swedlow (2021) in their survey of Douglas-related research offer some novel potential avenues for exploratory NDIT research such as content analysis and provision of deliberative fora (for example, face to face panels, social media, and computer mediated games (Johnson and Swedlow, 2021). However, the researcher would need to accept that the generalisability of the thought-style perspectives into other contexts might be limited.

3.4.4 Mixed Method NDIT Research

The vast majority of NDIT research to date has either adopted a quantitative (survey) based approach or a qualitative approach depending on the aims and scope of the study. It is unclear why mixed methods are rarely utilized, but this may be to do with the aim and scope of the study, or skills and resources available to researchers. However, a mixed method approach may overcome limitations of both quantitative and qualitative techniques.

Verweij et al (2011, p.2) proposes that nested case studies could be used for mixed method NDIT research, where several accumulated case studies are quantitively analysed with detailed qualitative review of a sample. This method involves collaboration across researchers, thereby reducing the impact of researcher bias and requiring development of a common means of NDIT measurement, but the approach may prove impractical for individual NDIT research projects. Johnson & Swedlow (2021) further state that a collaborative research platform has been constructed for comparative nested analysis of cultural influences on assessment and regulation of environmental, health, and safety risks in the US and Europe (Johnson and Swedlow, 2021). As an alternative, case study and survey research could be performed together, ensuring that the survey reflects the temporal and local characteristics of the organization being studied, and the results provide assessment of an organisation's culture at scale, whilst providing deeper insight into its social relations.

Verweij et al (2011) also illustrates that NDIT research tends to test just one or two of NDIT's central 'hypotheses', and that the hypotheses tested align with specific research methods. For example, case studies have been used to validate the hypothesis that solutions to social and political problems must consider all thought-styles, whereas quantitative surveys have been used to validate the hypothesis that

ways of organizing contribute to a 'cultural bias' that impacts how individuals (for example) perceive risk. Researchers are therefore identifying the NDIT hypotheses central to their piece of research, and then deploying the research method most appropriate to explore them. Verweij's observation perhaps offers some explanation to why there are few mixed method NDIT studies.

3.4.5 Conclusion: NDIT Research Methods to date

Whilst there are well-established NDIT research methods, such as Dake and Wildavsky's questionnaire (*Appendix 1*), there are some clear opportunities to overcome identified shortcomings in quantitative NDIT research, to further explore additional types of qualitative research, and to enhance the utility of a study by using mixed methods. NDIT research methods should be able to articulate the Douglasian theoretical assumptions used either in the question design or subsequent analysis, and it is clear that is not always the case in previous studies. Ultimately, the selected research method must suit the aims of the study, even if this means using unexplored or novel approaches. The next section details the research design for this study and considers opportunities to refine research methods from prior NDIT studies.

3.5 Research Design

The following section outlines the research strategy, design and methods for this study, taking into account the strengths and weaknesses of previous studies, and the research aims and objectives for this study. As a reminder, the objectives are to:

1. Identify risk perceptions and risk cultures within the context of financial services and to evaluate their implications for the management of risk within this context.
2. Compare the risk perceptions and risk cultures identified under the three alternative research methods and to evaluate the implications for researching NDIT.
3. Evaluate the implications of the results for how NDIT is conceived.

These objectives form three research questions:

- Research question 1 (knowledge contribution). What are the risk perceptions and risk cultures present in the FS firm and what are the implications of these risk perceptions and risk cultures for the management of risk within the firm and for the FS sector?

- Research question 2 (research design contribution). How do the risk perceptions and risk cultures compare under the three research methods and what are the implications for researchers employing NDIT?

- Research question 3 (theoretical contribution). What are the implications for how NDIT is conceived?

3.5.1 Research Strategy

It is critical that the research paradigm and methods research aligns to the aims and objectives of a study. For this study, research questions (listed above) seek to identify and analyse risk cultures that are present in the UK Insurer, whilst also providing opportunity to refine NDIT research techniques and contribute towards NDIT theory. The study must achieve both depth and breadth in its data collection to provide sufficient insight and answer each question. The research method must enable large-scale analysis of the UK Insurer's risk culture(s) whilst also providing rich insight into the characteristics of each NDIT thought-style and their impact to the organisation. As evidenced above, NDIT research employing solely quantitative or qualitative methods alone tend to generate a limited perspective. Quantitative NDIT studies provide a limited level of insight into the nature of the culture being studied, and qualitative studies perform an exploratory role but the generalisability of findings can be unclear. Additionally, another aim of this research is to be able to compare multiple sources of data traditionally used in NDIT and evaluate the advantages of each, whilst addressing the paucity of mixed method NDIT studies. Therefore, this study will adopt a mixed methods research approach that combines quantitative survey data with qualitative input. To support the adoption of mixed methods, the study is underpinned by a pragmatist paradigm. A pragmatist paradigm allows the research to be conducted in a reflexive manner, employing both deductive and inductive reasoning to respond to the research questions, and enabling the practical implications of the research outcomes to be evaluated. It also sidesteps traditional dichotomies associated with the research paradigms adopted by quantitative and qualitative research. For these reasons, it is argued that mixed method research approach supported by a pragmatist paradigm is the most appropriate strategy for this research.

The following section outlines the quantitative and qualitative approaches, as part of the mixed method approach, that are used to answer each of the three research questions.

3.5.2 Data Collection

The sections below detail the design of the survey instrument. Data was collected via a quantitative and qualitative survey of the population in a UK Insurer. The quantitative and qualitative aspects of the survey allow for triangulation of the results and enable each of the research aims and objectives to be achieved. The survey ran from October 14th to December 31st, 2019, targeting employees from all functions and business areas of the UK Insurer. A total of 543 responses were obtained with a good spread across all business areas, management grade, gender, and UK office location. The results represent an overall UK organisational response rate of c.5%.

Prior to data collection, the questions were tested with ten members of staff in the UK Insurer to ensure that the system functioned correctly, and the questions could be fully understood by participants. No issues or points of confusion were raised. The results from the first ten responses also confirmed that the survey questions were capable of identifying different perspectives, as the respondents returned varying answers to the questions. However, it was not possible to reliably test the survey instrument, or individual questions, for validity and consistency until a larger sample of data had been collected.

The survey was administered online using the Qualtrics platform. Uptake was driven through an email cascade from the researcher to senior leaders and then downwards to their teams. An invitation was placed on the intranet staff forum, visible on the staff intranet homepage. The researcher's own network was also used to approach teams that had returned lower number of responses or had not participated, to encourage a good spread by business area.

3.5.3 Survey Purpose and Design

The survey was designed to answer each of the research questions using a mixed methods approach. Firstly, the survey enables the research to identify the thought-style mix within the UK Insurer and across demographic groups (research question 1). Secondly, the survey comprises three parts and this allows thought-styles to be identified using three different methods, both quantitative and qualitative, and compared. This also enables the researcher to examine methodological implications for NDIT research (research question 2). Finally, the survey design enables the researcher to draw conclusion regarding NDIT (research question 3).

The survey was designed to comprise three parts as detailed below. Part one focuses on identifying relational patterns within the organization through the use of a survey instrument designed to measure the Group dimension and the Grid dimension for individual respondents. Part two identifies (a) the attitudes

of the individual respondents to alternative risk management approaches and (b) asks the respondents to rank different types of risks pertinent to the UK Insurer. Part three includes an open-ended question whereby respondents are asked for their views on how risk is managed in the organisation. Demographic data is also collected for each respondent. The next sub-sections discuss in detail the development and design of each part of the survey instrument.

3.5.3.1 Survey Part 1 Design: Group and Grid Questions

The survey designed for this study has considered the strengths and weaknesses of prior NDIT studies (see section 3.4 above). This study used a bespoke survey instrument and the first part of the instrument measures Group and Grid dynamics individually, which are cross-tabulated to determine respondents' NDIT worldviews. A new question set was created for measuring Group and Grid dynamics, and this was necessary as pre-existing instruments do not satisfactorily measure Group and Grid. Nor do pre-existing instruments focus only on relational patterns within an organisation, and nor are they sufficiently context specific. That said, it remains difficult and challenging to define a series of questions that definitively capture Group and Grid dynamics, as the nature of these dynamics remain open to debate. Nevertheless, a set of Group and Grid -based questions have been prepared by the researcher specifically for this study to garner insight into the nature and coherence of these dynamics.

In designing questions to capture Group and Grid dynamics consideration has first been given to the attributes or 'predicates' underpinning them. Gross & Rayner (1985) and Hampton (1982) propose predicates which were introduced in Chapter 2. For Gross & Rayner, these predicates and supporting methodology are untested. Hampton formulated predicates into statements, and in association with Douglas, used them across two studies (Hampton, 1982).

The predicates borrowed from Gross & Rayner (1985) and Hampton (1982) for question design in this first part of the survey instrument are listed in the section below. In selecting these predicates for this study, the relevance of the concepts to the foundational concepts of NDIT has been considered. In each case, it is judged that there is, prima facie, sufficient alignment to the Douglasian depictions of Group and Grid described in chapter 2. Together, the predicates provide an operational (real life) definition for the Group and Grid concepts. However, as Chapter 2 highlighted, both Group and Grid concepts remain subject to discussion and clarification, and Grid appears to be multi-faceted. In utilising Gross & Rayner and Hampton's predicates this research can test their overall cohesiveness, with each other and as a whole.

All Gross & Rayner's predicates have been utilised. For Hampton those deemed to be 'high value' by Hampton and Douglas, following testing, have been selected. Three of the 'high value' predicates were de-selected as it was judged they would be considered to be true by all employees in the UK Insurer and therefore not yield differing responses. De-selected predicates from Hampton are: working as part of a hierarchical organisation, having a boss, promotion is tied to seniority. Finally, it is not suitable to ask whether individuals have lunch or drinks with colleagues, as Hampton suggests for Group, as the UK Insurer has a high number of workers who work virtually at least some of the time.

Working patterns within corporations have undoubtedly changed since Hampton and Douglas published their work. The alterations made to Hampton's list of predicates highlight that it may be necessary to adapt NDIT surveys to the organisation being researched and their working practices to produce meaningful responses. As working practices evolve, for example virtual and remote working, so too must consideration of the question set. There seems to be an inevitable compromise between temporal and organisational relevance and transferability of the survey instrument into other time periods and contexts. However, the majority of Group and Grid predicates suggested by Gross & Rayner and Hampton are sufficiently transferable to adopt for this research.

Selected Group Predicates

All were selected from Gross & Rayner (1985):

- Proximity: Measure of closeness of group members, frequency of interactions
- Transitivity: Likelihood that if Member 1 interacts with Member 2 and 2 interacts with 3, then 1 will interact with 3
- Frequency: Proportion of time a group member spends in some activity with other members
- Scope: Diversity of a member's interactive involvement in group activities
- Impermeability: Likelihood that a non-member who satisfies membership requirements will gain membership.

From Hampton (1982):

- Work as part of close team
- Unwritten rules at work involving co-operation
- Have collections and parties when people leave

Selected Grid Predicates

All were selected from Gross & Rayner (1985):

- Specialization Number of possible roles a group member assumes in each time span
- Asymmetry: Measure of lack of symmetry in role exchanges among group members
- Entitlement: Proportion of ascribed versus achieved roles in the group
- Accountability: Amount of member interactions in which one is dominant and the other subordinate

From Hampton (1982):

- Rules and regulations at work
- Responsibility limited to well-defined areas
- Segregated facilities at work

There are some additional concepts in Douglas' work that are not represented in Gross & Rayner's or Hampton's predicates for Group and Grid and that appear integral to NDIT. The themes of group rituals and classification, including the management of anomaly, were discussed in Chapter 2. Ritual and classification have been added to the list of predicates that inform both Group and Grid. The predicates for Group and Grid are listed alongside the list of questions in *Appendix 5*. This is the final set of questions used in the study.

To summarise: this study has used the predicates from Gross & Rayner (1985) and Hampton (1982) as the start point, on the premise they are, prima facie, sufficiently aligned to Douglasian depictions of Group and Grid as discussed in Chapter 2. All Gross & Rayner's predicates have been deemed appropriate for use, and some of Hampton's. Those of Hampton's deemed 'high value' by Douglas and Hampton were initially selected, though four were subsequently de-selected due to lack of applicability within the UK Insurer. By reference to the theory, two additional predicates – ritual and classification – were added.

Next, each of the predicates were phrased into questions that are deemed appropriate to the context of the UK Insurer (*Appendix 5*). In articulating the questions, focus is given to working patterns within the organisation and not on individual opinions, preferences or judgements. For example, respondents are asked to consider their 'team environment' and what typically happens around them and to them. This is to mitigate against psychological or social desirability bias, and ensure the answers are limited to the target context – the UK Insurer – which will reduce the possibility of misinterpretation. Limiting the questions to organisational scope also allows the thought-style analysis to be context specific, taking into consideration that people may behave differently in and out of work. However, data collection of this kind will always be somewhat reliant on an individual's perception of how the organization works.

Responses for this part of the survey are measured using a seven-point Likert scale, to allow for a greater variance in responses that might highlight more subtle differences across thought-styles. Most of the Likert answers range from strongly agree – strongly disagree with a mid-point of neither agree nor disagree. By contrast, Gross & Rayners predicates were not developed into specific questions or tested, and Hampton used a binary scale of yes / no to capture responses.

3.5.3.2 Survey Part 2 Design: Risk Statements

Part two of the survey instrument seeks to establish attitudes to risks and organizational responses to them. Short statements were created to encapsulate the attitude of the four worldviews towards risks and risk management. These statements draw upon research performed by Thompson, Underwood and Ingram (Underwood et al. 2014) (Ingram et al. 2014), where four risk attitudes were characterised – Conservator (Egalitarian), Manager (Hierarchist), Maximiser (Individualist), Pragmatist (Fatalist). The risk statements have been refocused to consider risk management generically rather than just management of capital investment strategy which is the focus of Underwood and Ingram's work. This increases relevance to an all-employee target audience and enables broader applicability of the results. The criteria underpinning the four risk statements is detailed in *Appendix 6*, and they have been reviewed against the depiction of solidarities in Chapter 2 for consistency (Fig. 2.2; from 6, 2006, pg.99). An individual's responses to the first part of the survey (Group and Grid questions) should, according to the theory, correspond to the preferred risk statements in the second part of the survey. For example, somebody identifiable as high Grid and high Group in part 1 of the survey, should respond to part 2 of the survey by selecting the Hierarchist statement as their preferred statement.

Next, part 2 of the survey asks respondents are asked to rank 10 risks in order of importance for the business (*Appendix 7*). The risks are common strategic and operational risks that need to be managed by FS firms – for example, poor customer service, loss of talent. This list was derived from industry sources that describe the top risks facing them in 2019 (Deloitte, 2019; Ingram 2019). The purpose of this survey question is to ascertain whether there is any relationship between Grid, Group, and the preferred risk statements and the type of risks individuals consider to be most important. According to some Douglasian research (such as Kahan 2003, 2007) different thought-styles may view and prioritise risks differently, but the relationship between thought-styles and views towards specific risk types has not been comprehensively tested in prior studies. Other NDIT scholars argue that in theory, there should be no relationship because NDIT is concerned with how cultures think, not what they think; it is not an

ideational theory (6, 2021).

3.5.3.3 Part 3 Survey Design: Qualitative Responses

In the third and final part of the survey, respondents are asked two open qualitative questions. This is a deliberately general prompt to elicit opinion without constraint.

Respondents are first asked: *Do you have any other feedback on how this organisation manages risk?* Qualitative feedback of this nature potentially provides additional insight into how the four thought-styles (derived from the Group and Grid questions) conceptualise and communicate about risk management. The feedback is used in three ways. Firstly, to contribute to a more detailed understanding of how risk management is understood and communicated by each thought-style, and better inform a discussion on implications of the thought-style mix for the UK Insurer, supporting research question 1.

Secondly, the feedback is used as an additional determinant of thought-styles and contrasted with the thought-styles derived from Group and Grid questions and the risk statements, supporting research question 2 on NDIT research methodology. When triangulated with the other sections of the survey, qualitative comments on risk management may present theoretical implications for NDIT, supporting research question 3.

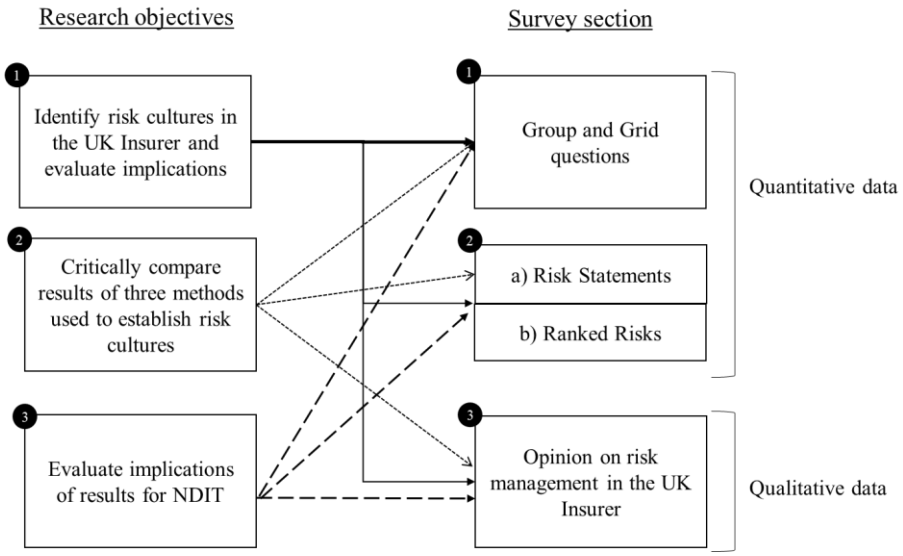
Finally, respondents were asked: *Do you have any comments on this survey?* This is useful to establish whether there have been any difficulties or confusion in completing the survey, which could inform how the results are interpreted. This did not reveal any difficulties in completing the survey or show and misunderstanding about the nature of the survey on behalf of the participants.

To summarise, the survey design aims to establish relational patterns between Group and Grid concepts, how these align to risk attitudes (aligned to thought-styles) and priority view of risks. The multiple data sources allow triangulation of information to support an evaluation of the research methods commonly used in NDIT studies, implications for theory itself, as well as providing a more nuanced view of risk culture in the UK Insurer.

Fig 3.1 below illustrates how each of the three survey sections are used to achieve each of the three research objectives. The Group and Grid questions will be the 'primary' indicator of thought-styles in the UK Insurer, which is reflected in the thickened line. The risk statements and qualitative comments offering additional exploratory data into the nature of thought-styles and the implications of deploying

each data collection method. The Group and Grid questions are selected as the 'primary' indicator of thought-styles because the Group and Grid questions are most closely aligned to foundational Douglasian concepts and are less likely to be subjected to bias. It is also important for consistency as the three data sources are triangulated.

Fig. 3.1: Research objectives and data sources



3.6 Data Analysis

The next section describes how the data is analysed so the results can be used to achieve the study's aims. The method for data analysis is set out for each part of the survey in turn. For part 1 of the survey, this includes a detailed explanation of how the NDIT thought-styles can be ascertained from aggregate analysis of the Group and Grid survey questions which comprise the first part of the survey.

3.6.1 Part 1: Group & Grid questions

The data from the Group and Grid survey questions were statistically analysed using IBM SPSS. Statistical analysis in SPSS enables swift deductive inferences about a survey population to be made (Field, 2005) (Antonius, 2012), and assist in evaluating the accuracy of the survey instrument. This will include generating descriptive statistics, a consistency assessment based on Cronbach's alpha, and

exploratory factor analysis. Specifically, the analysis will show the spread of responses (standard deviation), the level of skewness and kurtosis, and the mean for each question. This will identify the extent to which the population agreed or disagreed with the questions, and to what degree views diverge. This will help to gauge different levels of sentiment in the UK Insurer and assess the ability of the survey instrument in identifying NDIT thought-styles.

Next, tests for internal reliability and validity will be used assess the quality of research and indicate whether the questions measure the same underlying theoretical construct. Performing these tests will help to establish whether together the survey questions have been successful in capturing latent Group and Grid forces, and the consistency of the responses overall. It is particularly important to test for internal consistency for this study as the questions are designed to measure Group and Grid within an organisational setting. Inferences can therefore be made about the effectiveness of this new survey instrument. Cronbach's alpha is the most used measure of internal consistency and construct validity in surveys made up of multiple Likert-type scales and items (Field, 2005). Cronbach's alpha establishes whether the survey questions share some common variance with at least some other items on the scale. As it is a co-efficient of reliability it can help assess the extent to which the questions are coherently measuring the Group and Grid dimensions. The relationship between the Group and Grid questions will also be evaluated through inter-item correlation analysis.

Finally, Exploratory Factor Analysis (EFA) is a method for exploring the constructs underlying questionnaire items and this can also be performed in SPSS (Bryman, 2015). EFA will be used of the Group and Grid questions will explore the inter-relationships between questions, and which groups of questions are linked by underlying constructs. EFA is particularly useful for this study because the question set derived from Group and Grid predicates across the NDIT literature is new and untested. EFA will help assess the nature of the underlying variables supporting the Group and Grid predicates. This is potentially important as a multidimensionality of the Group or Grid constructs mean that these dynamics are more complex than the theory in its current form suggests. EFA allows these concepts to be inductively explored.

3.6.2 Determining Thought-Styles from Group & Grid Questions

As this study has designed and deployed a novel survey instrument to measure the Group and Grid dynamics in the UK Insurer, consideration must be given as to how the thought-styles are derived from this data, as no precedent exists. One way of deriving the thought-styles is to categorise respondents into

high-Group/low Group and high-Grid/low-Grid according to their scores to all questions, by obtaining a mean score for the Group and Grid questions. This approach is viable if it is accepted that the question respondents do not have to experience Grid and Group in the same way. For example, two respondents with the same mean Grid score might not have identical answers to the questions as they report differently on the elements of the Grid dynamic. Indeed, Douglasian theory does not assert that the experience of Group and Grid dynamics must be identical across all individuals within an organisation and, therefore, this approach might be deemed valid.

Alternatively, the thought-styles could be derived by using a subset of questions that embody coherent underlying factors in the EFA (thereby excluding questions that do not align to coherent EFA components). This maximises the potential to capture the strongest latent variables as they apply to Group and Grid, which may in turn, provide more meaningful conclusions when correlated with the risk preference survey data and qualitative data. If thought-styles are derived under both approaches - i.e., according to Factor Analysis Components and according to all scores – then an appropriate next step is to test whether there is a material difference to the distributions of thought styles between the two approaches. This will form part of the methodology for determining thought-styles.

Another consideration is that it will not be practically possible to split the group into 'high' and 'low' using a mean of 3.5, as the Likert scale uses full integers, so the scores would have to be split around a score of either 3 or 4. Therefore, responses will be distinguished as low or high using the actual mean for each question. This allows respondents to register a lower or higher than typical answer to one or multiple questions and plots them on a relative rather than absolute basis to their colleagues. For example, if the mean for the question is 4.25, this would be rounded down to 4, and any respondents that answered 4 or higher for that question would be categorised as having provided a high score. Another advantage of this approach is that the data does not lose a difference in opinion across the sampled population, even if answers are skewed either negatively or positively.

The approach being adopted for deriving where everyone is positioned on the Grid-Group diagram is as per the following steps:

- The mean for each Group and Grid question is obtained. Each mean is then rounded either up or down to the nearest full integer. (For example, if a question mean is 3.20 this would be rounded to 3. It is necessary to round the mean up or down because the responses are full integers (1-7) so question responses need to be sorted on that basis.)

- For each individual their response to each Group and Grid question is assigned a binary number (0 or 1) depending on whether it is higher or lower than the mean for the question. If the response is at or below the question's overall mean, then a score of 0 is recorded for that individual participant and for that question. If the response is above the mean, then a score of 1 is recorded.
- This then produces a set of 0s or 1s for each respondent for the Group questions and another set for the Grid questions.
- Overall Group and Grid scores are then calculated for each individual by adding the 0s and 1s and then dividing by the number of questions for Group and Grid (11 questions for each) to obtain a percentage. This gives one percentage score for Group and one percentage score for Grid per respondent, ranging from 0 to 100%.
- Respondents can then be individually positioned on the Grid-Group diagram by reference to whether their Group and Grid scores are above or below a mean of 50%.

As an example, if a respondent provided scores to 4 of the Grid questions that were higher the mean for each Grid question, and 9 of the Group questions that were higher than the mean for each Group question, then they would be allocated a percentage of 36% for Grid (4 as a percentage of 11 Grid questions) and 81% for Group (9 as a percentage of 11 Group questions). This suggests they are an Enclavist in the NDIT model (high Group, low Grid).

It is important to note there is no established methodology in NDIT for how to position individuals on the Grid-Group diagram and, further, the survey instrument is devised by the researcher. The above steps have been designed and followed as there is a logic to this approach as it allows respondents that are higher or lower on the Group or Grid scale to be identified and also achieves a requisite variance of four thought-styles. The resultant scores can be plotted into a 2x2 matrix or shown as percentages of thought-styles. Note that because this approach enables the researcher to identify where each respondent is positioned on the matrix it then also allows the dominant thought-style across the full sample to be identified.

3.6.3 Part 2: Risk Statements & Ranked Risks

The data analysis method for the preferred risk statements was performed manually in Excel, by obtaining percentages from each respondent. These are presented as percentages of most favoured statement, and are be cross-tabulated by demographic variables to assess relationships to these factors. The percentages

derived from the thought-style risk statements are also cross-tabulated with the percentages of Group and Grid derived thought-style. This facilitates a comparison between thought-styles from two different quantitative methods.

Similarly, the ranked risks are presented as percentages of the most favoured risk, and risks that were ranked in the top 5 (of 10). When cross tabulated by the thought-styles, this indicates whether there is a relationship between NDIT thought-styles and risk perception.

3.6.4 Part 3: Qualitative Responses

The next section outlines the data analysis method for the qualitative comments received in response to the question: *Do you have any other comments about how this company manages risk?*

As a reminder, the qualitative survey data serves two purposes – it is required to:

- provide a third view of the thought-styles present in the organisation, which will be contrasted with the other two data sources (Group and Grid questions and preferred risk statement).
- provide more granular insight into the different thought-styles as they present in the UK Insurer, which will help to determine implications for risk management in the organisation. This is achieved through content analysis of the qualitative comment data provided by each thought-style.

To achieve the first aim, the qualitative comments are coded according to their alignment to NDIT thought-styles, using the approach of content analysis. Content analysis allows qualitative text to be quantified into predetermined categories in a systematic and reproducible way (Bryman, 2012), as part of a mixed method study. This is achieved through a coding process, assigning each response to a predetermined category based in existing theory (Eriksson and Kovalainen, 2016) - in this instance, the NDIT thought-styles. Data that is qualitatively coded into quantitative data can then be integrated with other sources of quantitative data – in this instance, it is compared with the Group and Grid question and preferred risk statement data outputs.

To ensure consistency across this study, the same risk attitude criteria set out to create the ranked risk statements (detailed in *Appendix 6*) are used to code the comments. Each comment has been assessed according to sentiment and assigned one of the four thought-styles based on the sentiments and alignment to the risk attitude criteria in *Appendix 6*. For example, if the comment refers to the desire for autonomy

and empowerment in managing risk in the UK Insurer, it has been coded as an Individualist comment, as NDIT would hold that these are attributes of an Individualist thought-style.

It is acknowledged that the accuracy of coding can be imprecise and present ambiguity (Saldana, 2015). Furthermore, quantitative content analysis focuses on the manifest content of qualitative data (Schreier, 2012) and may not reflect deeper meaning intended by the subject. Although efforts have been made to objectively assess each qualitative comment and categorise into a thought-style, it is somewhat inevitable that the interpretation is influenced by the researcher's interpretation of NDIT thought-styles. Their positionality as a senior employee in the UK Insurer may mean that greater insight emerges from the text than if this data had been collected by a wholly independent researcher, but again, this could be subject to bias. To mitigate bias somewhat, the categorisation of the comments into NDIT thought-styles has been overseen and sense-checked by the researcher's supervisory team. Such a process of 'member checking' with peers or supervisors can be advocated as a way of clarifying emergent results and exploring areas of ambiguity (Saldana, 2015), whilst reducing bias.

The thought-styles derived qualitative comments are then cross-tabulated with the thought-styles derived from the Group and Grid questions. In theory, the thought-style obtained in part 1 of the survey (Group and Grid questions) should return a comment that is of the same thought-style. A disparity in these results may have implications for NDIT methodology, which will be explored in chapter 6.

To provide more granular insight into thought-styles in the UK Insurer, the qualitative comments can also be coded and quantified according to sentiment, to see which sentiments are most common across each of the NDIT thought-styles. Thematic content analysis is an emerging area of qualitative content analysis that identifies categories, similar and contrasting sentiment, and repetitions in the data that provides the researcher with greater theoretical understanding of the data (Bryman, 2012). Thematic analysis can be an inductive process based on categories, activities and patterns in the data, rather than pre-existing theoretical frameworks (Kovaleinen and Eriksson, 2016), which is the approach taken in this study. However, as with the process of coding, thematic analysis may also be subjected to the researcher's theoretical position and voice (Braun and Clarke, 2006) which must be taken into account when setting up frameworks for analysis and reviewing the data.

There is no commonly prescribed method for thematic analysis, and the process of identifying and categorising data into themes is often iterative and reflexive (Terry *et al.*, 2017). Detailed and immersive review of the was performed establish an appropriate coding framework, and then sentiment grouped into

themes and quantified. First, it was apparent that most, though not all respondents, were critical of how the UK Insurer manages risk. This produced six broad code themes relating to criticism of risk management, to which one positive code theme, and one code theme relating to discussion of specific risks was added. The six broad code themes relating to criticism were developed further into several sub-code themes that represented detailed rationale behind the critical sentiments. This approach allowed both broad positive and negative sentiments towards risk management in the UK Insurer to be captured, whilst further examining the reasons why. NDIT would predict that each thought-style may reflect a different perspective towards how risk is managed within an organisation, and where the sentiment aligns, the rationale behind the sentiment may differ. For example, both the Egalitarian and Individualist thought-styles might both be in favour of less perceived bureaucracy, but their motivations for saying this are different. The coding structure allows for comparison of views across thought-styles, and also allows them to have some perspectives in common, which aligns with NDIT.

Additionally, analysis of the words used in the qualitative comments illustrates the relationship between language, terminology and NDIT thought-styles. It is possible to draw inferences from the textual data on the nature of the thought-styles, how they think about risk and manage risk within the organisation. For example, it could be assumed that respondents from the Hierarchist thought-style will use different language and terminology to describe how the organisation manages risk to other thought-styles (such as Individualist or Enclavist). To perform this analysis, the qualitative feedback from each Group and Grid-derived thought-style is grouped together, and then analysis performed separately on each of the four sets of comments. Data analysis software can used to efficiently analyse language and word count as part of qualitative studies (Bazeley and Jackson, 2013; Bryman 2012). NVivo 12 is used to execute analysis of each set of comments, producing a list of words and frequency. This, alongside the sentiment coding, provides greater insight into the nature of the NDIT thought-styles within the UK Insurer and implications for risk culture.

Analysis of the qualitative comments using both existing NDIT thought-style predicates, whilst also exploring deeper perceptions revealed in the text, is consistent with the pragmatist paradigm and reflexive approach to collecting and interpreting data throughout this study. It enables an assessment of the qualitative feedback against existing NDIT theory whilst broadening the understanding of thought-styles.

3.7 Ethical Concerns relating to the Data Collection

There are several ethical concerns associated with this research, particularly the possibility of harm to survey participants, harm to the researcher and as a professional within the organisation, risk of harm or reputational damage to the UK Insurer. The University of York ELMPS Ethics Committee granted approval of the research in July 2019, on the basis that the matters discussed in the following section had been considered and mitigated.

3.7.1 Anonymity, Confidentiality and Voluntary Participants

There was a risk that individuals did not understand the nature of the research, how their responses will be used and that the survey is voluntary. This was mitigated by consistent communication and signposting of the voluntary and anonymous nature of the survey. A detailed and clear brief was provided to participants which is in *Appendix 4*. The brief clearly states that the data will only be used for the purposes of this research, that a high-level summary of the results may be shared with the CEO but not wider, and individual feedback would not be shared. The survey format also allows respondents to skip questions they do not feel comfortable in answering. The brief states no personal data will be collected. There was a risk that personally identifiable information was provided in response to the qualitative feedback questions. Had this occurred, these responses would have been omitted from the study and not used in analysis.

Given the researcher's professional role in the organisation, there is also a possibility that respondents felt compelled to take part in the survey or provide feedback in line with social and professional expectations. This is somewhat mitigated by the steps outlined above. Conversely, there is a possibility that participants felt more comfortable responding openly to a member of staff than if they are approached by an external researcher with no relationship to the company.

3.7.2 Harm to Researcher

The main source of potential harm to the researcher was potential misunderstanding in the UK Insurer about the extent or nature of the study. This was mitigated by the steps outlined above, particularly the preparation of a clear brief, stating that the data remains anonymous and will not disseminated to any third party. Additionally, the researcher had met with the UK Insurer's CEO and COO to discuss the aims and boundaries of the study, to avoid any potential misunderstanding in advance of the survey launch. Both members of staff were supportive of the researcher's personal academic goals and did not at any point demand access to data or try to subvert the aims of the study. It was agreed that any sensitive

information would be reported to an independent malpractice body and dealt with via that channel, rather than it being up to the researcher to respond.

3.7.3 Impact to the UK Insurer

There was a risk during the research that sensitive organisational information was uncovered. It was agreed with the UK Insurer in advance that any alarming feedback (for example, allegations of fraud or misconduct) would be reported to an independent malpractice body. The UK Insurer remains anonymous throughout this research and is not named in any of the qualitative feedback and identifying terminology has been removed. However, it is acknowledged that the identity of the UK Insurer could be inferred by review of the researcher's LinkedIn profile.

Significant harm could have been experienced by the researcher and participants in the event of data breach. No personally identifiable data was gathered as part of the survey, and opinion data on risk management is of a low commercial and reputational value. The survey instrument used standard software and storage (Qualtrics) which is covered by a University Data Privacy certification. The results have been stored on a personal laptop, which is password protected and connected to a secure network; therefore the risk of data leakage or unauthorised dissemination remained low. Draft copies of this thesis and the supporting quantitative and qualitative results have been shared with the researcher's supervisory team only.

3.8 Researcher positionality

Finally, it is important to consider the positionality of the researcher as a senior employee of the UK Insurer and implications for data collection, interpretation of results and development of conclusions. The mixed method approach and pragmatist paradigm selected for this study allows for the researcher's values to guide what is researched and how the results are interpreted (Tashakkori, Teddlie and Johnson, 2020) providing that 'warranted assertions' are obtained. Nevertheless, the potential impact of 'insider bias' means that researchers must be cognisant of the influence of personal perspectives on the research questions, design and data collection procedures (Chavez, 2008). The impact of personal values and theoretical assumptions should be minimised during this study, particularly as it aims to develop transferable insights about Douglasian theory and NDIT research methods that are not specific to the UK Insurer.

Some specific risks associated to the 'insider' status of the researcher included the potential for biased results, for example, participants decision to take part influenced by the research being conducted by a senior staff member), or the responses being subject to psycho-social bias (i.e. participants returning answers that they think are desirable). However, the anonymity of the survey participants helped to limit the researcher's personal interaction and influence with this community, and somewhat removes bias around interpretation of results from specific individuals or groups. Additionally, as a UK-wide study, the researcher was not professionally or socially connected to most participants. There is an additional risk that the 'insider status' of the researcher influenced data analysis and the development of conclusions. The methods for data analysis are described in chapter 4; for the quantitative results this followed a logical process. The qualitative outputs were evaluated and discussed with the researcher's supervisory team to limit bias and sense-check interpretation of sentiment.

Conversely, the researcher's position in the UK Insurer can be viewed as somewhat beneficial. As an 'insider' the researcher can understand shared values, challenges, and opinion relating to risk management in the UK Insurer, though the exact impact of this on the study's conclusions is difficult to ascertain. Brannick and Coghlan (2007) note advantage of language and terminology interpretation by 'insider' researchers, which also appears to have been an advantage for this study. Another advantage is the ability to assess the practical implications of the risk cultures identified in the organisation, both to the organisation itself and the FS industry. In chapter 5, the researcher can assess the implications of the four risk cultures on the UK Insurer and its ability to develop risk policies, communicate about risk and make risk decisions. This chapter is enhanced by the researcher's experience as a risk professional working in large organisations. Overall, it is argued that the researcher's positionality within the UK Insurer is beneficial in achieving the aims of the study, though conscious effort has been made to limit and account for bias throughout the research process.

3.9 Conclusion

The chapter describes and evaluates research methodology, and argues that to achieve the aims of this study, a mixed method approach supported by a pragmatist paradigm is most appropriate. It will allow simultaneous and reflexive investigation of the risk culture in the UK Insurer, whilst providing additional insights into NDIT research methods and the NDIT theory itself. Both quantitative and qualitative research methods are common across existing NDIT research, however, opportunities exist to enhance the accuracy and theoretical alignment of survey-based methods in particular. Mixed method research in NDIT is uncommon, which provides an additional opportunity for this study to advance NDIT research

methods. To address this, a bespoke survey instrument was developed to measure participant experience of the underlying Group and Grid dynamics (rather than the resultant thought-styles), which it is argued, produced a less circular and biased depiction of risk cultures in the UK Insurer. Risk statements have also been prepared which provided an additional quantitative indicator of risk culture. Qualitative opinions on risk management in the UK Insurer were gathered and analysed both quantitatively and qualitatively to provide a third indicator of risk culture, and also refine understanding of how each NDIT thought-style thinks about risk management.

The next chapter (chapter 4) presents the results for each part of the survey in turn, which are analysed according to the methods outlined in section 3.7. A comprehensive evaluation of the results is then provided in chapters 5, 6 and 7 to answer the three research questions. Chapter 5 comprises a detailed discussion of the risk culture(s) evident in the UK Insurer based on the results. Chapter 6 discusses the implications of the results for NDIT research and methodology design. Chapter 7 evaluates the implications of the study for NDIT theory, the conceptualisation of its underpinning concepts, and conceptualisations of risk culture using NDIT. The following chapter (chapter 4) therefore contains only brief observations on the data, which are then explored further in subsequent chapters 5, 6 and 7.

CHAPTER 4 – Research Results

4.1 Introduction

This chapter reports results from the survey instrument, with each part of the survey presented in turn. Brief commentaries are provided at relevant points in the chapter to explain and contextualise the data presented in the tables. Further and more detailed analysis of the results is undertaken in chapter 5.

The results from all three parts of the survey instrument are presented as follows. Part 1 includes the eleven Group (section 4.2) and eleven Grid questions (sections 4.3). Sections 4.2 provides results in respect of the Group questions and confirms that the Group question results are both internally consistent and valid. Results in respect of the Grid questions are presented in section 4.3. The outcomes of testing for internal consistency for the Grid questions are less conclusive than for the Group questions. However, it is concluded that this does not necessarily imply the Grid question set is unreliable. What it does suggest is that further reflection upon the nature of the Grid dimension is warranted and that there may be implications for the theory, which is explored in chapter 7. Section 4.4 then uses the responses to the Group and Grid questions to determine where individual respondents are positioned on the Grid-Group matrix (employing the methodology described in section 3.7.2). Positioning of each respondent on the Grid-Group matrix determines which of the four thought-styles the respondent is associated with. Different approaches are available for determining where on the Grid-Group matrix each individual respondent is positioned. This section compares the outcomes of using the alternative approaches and, by reference to the theory, justifies which one of these approaches is to be adopted for determining positionings on the Grid-Group matrix.

In Part 2 of the survey, respondents are asked to rank the four risk statements (each risk statement equating to one of the four NDIT thought-styles) and to then rank 10 risk types in perceived order of importance to the UK Insurer. The ranking of the four risk statements is the second method used for identifying which thought-style each respondent might be associated with (the first being the Group and Grid questions), and results are presented in section 4.5. Section 4.6 then includes a comparison of the thought-style each respondent is associated with using the ranking of the four risk statements to the thought-style each respondent is associated in part 1 of the survey (as determined in section 4.4). This

comparison reveals that results on respondent thought-style vary between part 1and 2 of the survey. Additionally, section 4.6 reviews the ranking of the 10 risk types by participants. The majority of respondents ranked Cyber and Customer Service risks as most important, though there is no significant correlation between thought-style and the ranking of the 10 risks. Finally, section 4.6 cross-tabulates the results from sections 4.4 and 4.5 with the demographic data so that potential relationships between NDIT thought-styles and demographic variables can be assessed as this may have implications for NDIT.

Finally, results of part 3 of the survey are presented in section 4.7 Part 3 comprises qualitative comments provided by respondents in respect of how they perceive the company manages risk. An assessment is made for each comment as to which thought-style it most equates to. This then enables the researcher to compare the thought-style for each respondent based on the comments to the thought-style each respondent is associated with in respect of part 1 of the survey (as determined in section 4.4). This comparison establishes that there is not always an intersection between respondent thought-style based on part 1and part 3 survey results. Additionally, this section both reviews the comments and codes them to themes and sub-themes regarding perceptions about risk management in the company, then analyses the language used in the comments in the form of coded sentiments and word count language analysis.

4.2 Group Question Results Analysis

This section analyses the data collected in response to the eleven Group questions in Part 1 of the survey instrument. Sub-section 4.2.1 sets out and discusses the descriptive statistics, sub-sections 4.2.2 and 4.2.3 test for internal consistency and validity including conducting Exploratory Factor Analysis (EFA).

4.2.1 Group Question Results Analysis: Descriptive Statistics

Table 4.1: Group Questions Descriptive Statistics

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Variance	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
People in my team work together to get things done, rather than delivering tasks alone	538	1	7	4.70	1.477	2.183	-.188	.105	-.867	.210
People in my team place greater importance on achieving shared goals than individual goals	538	1	7	4.47	1.553	2.413	-.409	.105	-.667	.210
My team use collaborative and open work spaces to get things done (virtual or physical)	536	1	7	4.29	1.652	2.730	.008	.106	-1.120	.211
I feel I know everyone in my team well	538	1	7	4.97	1.588	2.521	-.882	.105	-.045	.210
My team celebrates success and milestones (e.g. birthdays, leaving collections, project deliveries)	537	1	7	4.65	1.722	2.966	-.265	.105	-1.095	.210
People in my team do their best to ensure colleagues across the team are included in discussions and decision-making	539	1	7	5.06	1.457	2.122	-.874	.105	.030	.210
Generally, people in my team are welcoming to new joiners	535	2	7	6.23	1.114	1.241	-1.621	.106	2.226	.211
My team acts on input or contributions from other areas	537	1	7	5.02	1.381	1.908	-.380	.105	-.641	.210
My team get involved in each other's work, rather than just focusing on the tasks we are directly responsible for	540	1	7	4.05	1.462	2.139	.284	.105	-.840	.210
Where I work, there is a strong sense of what the team stands for	538	1	7	5.26	1.451	2.104	-1.059	.105	.531	.210
People in my team get regular cascades of information, or team briefings, to support us in our roles	538	1	7	4.95	1.503	2.260	-.492	.105	-.659	.210
Valid N (listwise)	528									

The standard deviation, skewness and kurtosis statistics for the eleven Group questions are set out in Table 4.1. Whilst the standard deviation for each question is not high (varying from 1.114 to 1.722) there

is a wide variability in the responses for all eleven questions as evidenced by the minimum and maximum statistics. The responses will determine where each respondent is positioned on the Group dimension of the Grid-Group matrix. The minimum and maximum statistics indicate that the sampled population is positioned across the full range for the Group dimension, with all but one question eliciting a full range of Likert scale responses (1-7)

To establish whether the data is normally distributed, skewness and kurtosis have been calculated. Skewness, a measure of symmetry, is the level to which the statistical distribution is positively or negatively distorted. All scores show symmetrical or moderately skewed responses, except for the following two questions:

- *Q7: Generally, people in my team are welcoming to new joiners*
- *Q10: Where I work, there is a strong sense of what the team stands for*

There is greater positive consensus for these two questions which is also reflected in a higher mean than for the other questions. Kurtosis measures the combined weight of the tails relative to the rest of the distribution, and therefore the probability for response outliers. All the questions return Kurtosis scores of between the rule of thumb threshold for normal distribution, -2 to +2 (George & Mallery 2010), except for the following question:

- *Q7: Generally, people in my team are welcoming to new joiners*

As reflected in the skewness statistics, the kurtosis scores for Q7 suggests a higher positive consensus across respondents than for the other questions. The skewness and kurtosis scores for Q7 and Q10 are discussed further in chapter 6. Although an initial observation is that this could be a result of some social bias in respect of these two questions and particularly in respect of Q7 when asking whether the team is welcoming to new joiners. The responses for Q7 and Q10 do not necessarily negatively impact upon the validity of the questions as they could simply indicate how aspects of the Group dynamic manifest within the organisation (i.e., that different teams in the organisation are very welcoming and they possess strong team identities).

Overall, the Group question statistics show that the variation in responses is across the full range for the Group dimension.This implies that it is possible to classify respondents as either high-Group or low-Group in respect of the Grid-Group matrix. This is important because high degree of agreement would make it difficult to claim that the results capture different levels of the Group dimension. It would also be problematic to suggest that though-styles could be inferred by the results. This is with the proviso that

there is also sufficient variation in responses to the Grid questions to classify responses to as either high-Grid or low-Grid (determined in section 4.3).

Finally, the mean scores for all the Group questions are all greater than 4. This is not necessarily problematic and it not necessary for the mean to be at the mid-point. The mean greater than 4 suggests that the Group dynamic is relatively strong within the UK Insurer.

4.2.2 Group Questions: Consistency & Validity

This section tests for internal consistency in respect of the eleven Group questions whilst the section that follows employs Exploratory Factor Analysis (EFA) to investigate whether any of the eleven questions can be grouped together in some form. This helps to evaluate the ability of the questions to measure the Group dynamic as an independent variable and establish relationships between the underlying predicates.

Table 4.2: Group Cronbach Alpha

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.842	.844	11

Table 4.3: Group Questions Item Statistics

Item Statistics

	Mean	Std. Deviation	N
People in my team work together to get things done, rather than delivering tasks alone	4.70	1.479	528
People in my team place greater importance on achieving shared goals than individual goals	4.48	1.546	528
My team use collaborative and open work spaces to get things done (virtual or physical)	4.28	1.651	528
I feel I know everyone in my team well	4.97	1.593	528
My team celebrates success and milestones (e.g. birthdays, leaving collections, project deliveries)	4.64	1.723	528
People in my team do their best to ensure colleagues across the team are included in discussions and decision-making	5.07	1.464	528
Generally, people in my team are welcoming to new joiners	6.23	1.118	528
My team acts on input or contributions from other areas	5.01	1.382	528
My team get involved in each other's work, rather than just focusing on the tasks we are directly responsible for	4.05	1.467	528
Where I work, there is a strong sense of what the team stands for	5.25	1.456	528
People in my team get regular cascades of information, or team briefings, to support us in our roles	4.94	1.507	528

To test for internal consistency for the Group questions Cronbach's alpha is calculated. An alpha score of 0.7 or above is commonly regarded as acceptable (Easterby Smith et al, 2015) (Field, 2005). Cronbach's alpha calculation in this research indicates that the Group questions have high internal consistency with score of $\alpha = 0.842$ (table 4.2). Additionally, all 11 group questions returned a Corrected Item Total Correlation between 0.342 and 0.622, which demonstrates that all items contribute towards the overall score (table 4.5).

The eleven Group questions are designed to measure the same construct; namely the purpose of the questions is that will be used to measure the position of everyone on the Group dimension. If an

individual scores one question highly on the Likert scale then we would expect them, as a matter of consistency, to score other questions highly; if this is not case then this suggests there is a lack of consistency in their responses and it is then debateable whether it is appropriate to sum the individual question scores to derive an overall mean score for positioning the individual on the Group dimension. To test the extent to which there is consistency of responses between the eleven questions Inter-Item Correlation scores are calculated. The Inter-Item Correlation scores were all positive and between 0.66 and 0.504, as shown in Table 4.4, showing that there is no issue in respect of the Group questions and that the questions are measuring the Group dimension appropriately. Overall, it can be concluded that the results for Cronbach's alpha and Inter-Item Correlation scores suggest that the questions measure the same underlying theoretical construct of Group. None of the questions would increase the alpha score beyond 0.84 if removed, as shown in Table 4.5 which, again, supports this conclusion.

Table 4.4: Group Questions Inter-Item Correlation Matrix

Inter-Item Correlation Matrix

	People in my team work together to get things done, rather than delivering tasks alone	People in my team place greater importance on achieving shared goals than individual goals	My team use collaborative and open work spaces to get things done (virtual or physical)	I feel I know everyone in my team well	My team celebrates success and milestones (e.g. birthdays, leaving collections, project deliveries)	People in my team do their best to ensure colleagues across the team are included in discussions and decision-making	Generally, people in my team are welcoming to new joiners	My team acts on input or contributions from other areas	My team get involved in each other's work, rather than just focusing on the tasks we are directly responsible for	Where I work, there is a strong sense of what the team stands for	People in my team get regular cascades of information, or team briefings, to support us in our roles
People in my team work together to get things done, rather than delivering tasks alone	1.000	.485	.340	.309	.360	.456	.357	.277	.514	.424	.383
People in my team place greater importance on achieving shared goals than individual goals	.485	1.000	.324	.314	.318	.473	.350	.257	.398	.348	.346
My team use collaborative and open work spaces to get things done (virtual or physical)	.340	.324	1.000	.203	.203	.355	.301	.356	.327	.305	.299
I feel I know everyone in my team well	.309	.314	.203	1.000	.311	.372	.368	.127	.261	.437	.295
My team celebrates success and milestones (e.g. birthdays, leaving collections, project deliveries)	.360	.318	.203	.311	1.000	.347	.306	.059	.337	.382	.393
People in my team do their best to ensure colleagues across the team are included in discussions and decision-making	.456	.473	.355	.372	.347	1.000	.414	.265	.351	.453	.445
Generally, people in my team are welcoming to new joiners	.357	.350	.301	.368	.306	.414	1.000	.211	.275	.379	.367
My team acts on input or contributions from other areas	.277	.257	.356	.127	.059	.265	.211	1.000	.144	.257	.254
My team get involved in each other's work, rather than just focusing on the tasks we are directly responsible for	.514	.398	.327	.261	.337	.351	.275	.144	1.000	.307	.270
Where I work, there is a strong sense of what the team stands for	.424	.348	.305	.437	.382	.453	.379	.257	.307	1.000	.405
People in my team get regular cascades of information, or team briefings, to support us in our roles	.383	.346	.299	.295	.393	.445	.367	.254	.270	.405	1.000

Table 4.5: Group Questions Item-Total Statistics

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
People in my team work together to get things done, rather than delivering tasks alone	48.92	85.668	.629	.440	.820
People in my team place greater importance on achieving shared goals than individual goals	49.15	86.138	.577	.361	.824
My team use collaborative and open work spaces to get things done (virtual or physical)	49.35	87.825	.469	.265	.834
I feel I know everyone in my team well	48.66	88.495	.468	.274	.833
My team celebrates success and milestones (e.g. birthdays, leaving collections, project deliveries)	48.98	86.837	.475	.287	.834
People in my team do their best to ensure colleagues across the team are included in discussions and decision-making	48.56	85.784	.632	.415	.820
Generally, people in my team are welcoming to new joiners	47.39	92.452	.529	.293	.830
My team acts on input or contributions from other areas	48.62	94.065	.340	.200	.842
My team get involved in each other's work, rather than just focusing on the tasks we are directly responsible for	49.58	88.886	.508	.333	.830
Where I work, there is a strong sense of what the team stands for	48.38	86.857	.593	.379	.823
People in my team get regular cascades of information, or team briefings, to support us in our roles	48.69	87.305	.550	.329	.826

4.2.3 Group Question Exploratory Factor Analysis

Exploratory Factor Analysis (EFA) is a method for exploring the constructs underlying questionnaire items and this can also be performed in SPSS (Bryman, 2015). EFA analysis is used to explore the inter-relationships between the Group and Grid questions, and which groups of Group or Grid questions are linked by underlying constructs. The data in Tables 4.6 and 4.7 shows that for the Group questions there are two Components with Eigenvalues of greater than 1. Components are the underlying variables identified by EFA, and Eigenvalues represent the total amount of variance that can be explained by a given component. The components for the Group questions are summarised in turn below.

Component 1 is significantly larger than the others and accounts for approximately 40% of variance. The component matrix loadings suggest that this factor is related to team inclusion and working together, with all the Group questions scoring a communality (amount of variance) of greater than 5, except for: *Q8: My team acts on input or contributions from other areas.* Component 2 accounts for 10% of variance, and the component matrix loadings suggest that this factor relates most strongly to the penetrability or openness of the team and the extent to which contributions from other areas are accepted. The following questions have loadings of 0.4 and 0.7 respectively, which show they are strongly correlated to Component 2:
Q3: People in my team use collaborative or open workspaces to get things done;
Q8: My team acts on input or contributions from other areas.

The results above show that whilst Component 1 possesses a high Eigenvalue and accounts for almost 40% of variance, the existence of 2 Components suggests that the Group survey questions have captured more than one underlying dynamic. It is also of note that there appears to be a degree of independence between the two Group factors identified above and in table 4.7– i.e., the tendency for individuals to work together as a team, and the tendency for the team to act on outside contributions. This is reflected in several negative matrix loadings between Components 1 and 2.

Most significantly, the EFA results show that whilst the Group questions obtained a high alpha score (0.84), they may not be unidimensional, because two EFA Components were identified. Together, these results indicate that the underlying Group dynamic, as represented by these survey questions, could be more complex than the theory might suggest. This possibility and its implications are explored further in chapter 7.

Table 4.6: Group Questions Exploratory Factor Analysis

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.368	39.705	39.705	4.368	39.705	39.705
2	1.084	9.852	49.557	1.084	9.852	49.557
3	.914	8.310	57.867			
4	.741	6.737	64.604			
5	.665	6.047	70.652			
6	.661	6.005	76.657			
7	.585	5.316	81.973			
8	.552	5.015	86.987			
9	.526	4.782	91.769			
10	.473	4.303	96.072			
11	.432	3.928	100.000			

Extraction Method: Principal Component Analysis.

Table 4.7: Group Questions EFA Component Matrix

Component Matrix[a]

	Component	
	1	2
People in my team work together to get things done, rather than delivering tasks alone	.725	.040
People in my team place greater importance on achieving shared goals than individual goals	.679	.062
My team use collaborative and open work spaces to get things done (virtual or physical)	.567	.475
I feel I know everyone in my team well	.577	-.335
My team celebrates success and milestones (e.g. birthdays, leaving collections, project deliveries)	.584	-.444
People in my team do their best to ensure colleagues across the team are included in discussions and decision-making	.731	.003
Generally, people in my team are welcoming to new joiners	.629	-.077
My team acts on input or contributions from other areas	.428	.718
My team get involved in each other's work, rather than just focusing on the tasks we are directly responsible for	.610	-.051
Where I work, there is a strong sense of what the team stands for	.690	-.126
People in my team get regular cascades of information, or team briefings, to support us in our roles	.651	-.047

Extraction Method: Principal Component Analysis.

a. 2 components extracted.

4.3 Grid Question Analysis

This section analyses the Grid survey questions in the same manner as the Group questions, comprising descriptive statistics analysis, reliability and validity and exploratory factor analysis. An overall evaluation is then provided of the implications for the Grid dynamic and the effectiveness of the survey instrument.

4.3.1 Grid Descriptive Statistics

The standard deviation, skewness and kurtosis statistics for the Grid questions are set out in Tables 4.8 and 4.9. As with the Group questions, the Grid questions show a wide variation in response. All Grid questions elicited a full range of Likert scale responses (1-7), with variance of between .873 and 3.496. Additionally, the standard deviation, or average spread around the mean, varies from .934 to 1.870. As with the Group questions, these results show that the sampled population reports different ways of organising and that the Grid questions were effective in capturing different perspectives. This means that the Grid questions can also be used, alongside the Group questions, to classify survey participants into high / low Grid and high / low Group.

To establish whether the data is normally distributed, or positively or negatively distorted, the skewness and kurtosis have been calculated. Skewness, a measure of symmetry, is the level to which the statistical distribution is positively or negatively distorted. All scores show symmetrical or moderately skewed responses, except for the following, which is significantly positively skewed:

- *Q15: Getting input from the right experts or specialists is vital for achieving company goals*

Kurtosis measures the combined weight of the tails relative to the rest of the distribution, and therefore the probability for response outliers. All the questions return Kurtosis scores of between the rule of thumb threshold for normal distribution, -2 to +2 (George & Mallery 2010), except for the following:

- *Q15: Getting input from the right experts or specialists is vital for achieving company goals*

As reflected in the Skewness statistics, the Kurtosis score for Q15 suggests a higher positive consensus across respondents than for the other questions. The reason for this is unclear and explored further in chapter 6. It may be that there is common consensus on the role and use of specialists in the UK Insurer. Indeed, within the FS industry it is accepted that certain categories of experts play an essential role in achieving the objectives of the company – for example, actuarial scientists and claims assessors.

Therefore, the result does not necessarily indicate that Q15 is an anomaly in the Grid questions as it could simply reflect that this is a key element of the Grid dynamic for the UK Insurer.

Overall, and with the exception highlighted above, the question statistics show that there is sufficient variation in responses (i.e., sufficient disagreement across the sampled population to the questions asked) to classify respondents into high-Grid/low-Grid. In establishing different thought-styles it is helpful that the survey instrument captured a variety of responses and disagreement across the survey audiences. Had all respondents agreed with each other throughout (resulting in low deviation, high skewness and kurtosis) it would be difficult to claim that the results capture different levels of Grid and therefore can be used to infer thought-styles. Combined with the sufficient variation across the Group questions, this suggests the survey data can be used to establish the positioning of each participant in respect of the four NDIT thought-styles.

Table 4.8 Grid Questions descriptive statistics

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Variance	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
My grade (seniority) and role in the company determines how I should act	539	1	7	3.83	1.797	3.230	-.075	.105	-1.293	.210
I change my approach to dealing with people depending on whether they are more senior or junior than me	536	1	7	3.35	1.514	2.292	.709	.106	-.165	.211
I have a highly defined role with a very distinct set of responsibilities	537	1	7	4.04	1.749	3.058	-.054	.105	-1.169	.210
Getting input from the right experts or specialists is vital in achieving company goals	537	1	7	6.09	.934	.873	-1.792	.105	6.013	.210
I tend to work within the boundaries of my role	539	1	7	3.91	1.679	2.820	.014	.105	-1.294	.210
I normally receive formal performance feedback at specific times, rather than informal feedback delivered 'in the moment'	538	1	8	3.75	1.797	3.229	.360	.105	-.705	.210
My team tend to take direction from senior management on what to do rather than deciding ourselves	539	1	7	3.87	1.546	2.389	.091	.105	-.887	.210
I often need to react to things over which I have little control	538	1	7	5.10	1.397	1.953	-.928	.105	.349	.210
I stick to processes, procedures and standards in the way I perform my role	537	1	7	4.88	1.387	1.923	-.728	.105	-.142	.210
In my team, if processes, procedures or standards are not adhered to, action will be taken to find out why	537	1	7	4.61	1.609	2.590	-.191	.105	-1.065	.210
The office space around me is restricted to people in particular roles or by people in more senior roles	535	1	7	3.20	1.870	3.496	.499	.106	-1.115	.211
Valid N (listwise)	527									

Table 4.9: Grid Questions Item Statistics

Item Statistics

	Mean	Std. Deviation	N
My grade (seniority) and role in the company determines how I should act	3.84	1.799	527
I change my approach to dealing with people depending on whether they are more senior or junior than me	3.34	1.509	527
I have a highly defined role with a very distinct set of responsibilities	4.04	1.754	527
Getting input from the right experts or specialists is vital in achieving company goals	6.09	.937	527
I tend to work within the boundaries of my role	3.89	1.683	527
I normally receive formal performance feedback at specific times, rather than informal feedback delivered 'in the moment'	3.74	1.797	527
My team tend to take direction from senior management on what to do rather than deciding ourselves	3.89	1.553	527
I often need to react to things over which I have little control	5.09	1.405	527
I stick to processes, procedures and standards in the way I perform my role	4.87	1.386	527
In my team, if processes, procedures or standards are not adhered to, action will be taken to find out why	4.60	1.613	527
The office space around me is restricted to people in particular roles or by people in more senior roles	3.21	1.874	527

4.3.2 Grid Question Consistency

As with the Group questions, the Cronbach's alpha score has been calculated to assess the internal consistency of the Grid questions. The Cronbach's alpha analysis in Table 4.10 shows that the Grid questions attained a lower level of consistency than the Group questions with $\alpha = 0.427$. This does not meet traditional levels of acceptability ($\alpha = 0.7$) and might indicate there is an issue related to internal consistency across the Grid questions. When viewing the inter-item correlations, the Grid questions returned a Corrected Item Total Correlation between 0.027 and 0.310, the majority of which are in the traditionally accepted range of 0.15-0.50 (Table 4.11). The Inter-Item Correlation scores between questions are varied and some are negatively correlated; these scores lie between -0.141 and 0.295 (Table 4.12). This indicates that further analysis is required to establish what this reveals about the Grid questions – whether different questions would elicit greater consistency, whether it reveals something about the nature of Grid, or the nature of Douglasian theory. Hence, a deeper review of the data follows below.

4.3.2.1 Further analysis of Grid Cronbach alpha scores

This section provides additional analysis of the low Grid alpha score and considers implications for this study and NDIT overall. This is then explored in more detail in Chapter 7. A low correlation score can be a result of unclear question wording or poor attention from respondents, rather than issues of internal consistency. However, as all Group and Grid questions were tested with a sample of respondents for clarity prior to issuing the survey and presented in a random order- a lack of clarity seems unlikely. Therefore, the lower internal consistency is likely to be due to the questions themselves, or the nature of the underlying Grid constructs. It is possible that internal consistency for the Grid questions can be improved by removing specific questions, thereby reducing the number of questions being analysed. It is also possible that a higher alpha score is present when the Grid alpha is cross-tabulated by level of seniority, role type and gender, as it is possible that Grid is experienced differently depending on these factors. As is evidenced below, the alpha score for Grid varies somewhat when cross-tabulated by demographic factors, suggesting that Grid is experienced differently by different people, however, the scores still do not approach traditional levels of consistency ($\alpha = 0.7$).

To further understand the low consistency scores of the Grid questions, firstly the impact to the alpha score of removing questions is tested. This is a crucial step in establishing which questions might be most relevant to the Grid dynamic, and to further assess the relationship between Grid questions. Table 4.12 **(**Grid Item-Total Statistics) shows the extent to which the alpha score improves by removing questions.

This table shows that the alpha score can be increased to $\alpha = 0.458$ by removing the three questions below:

- Q15: *Getting the right input from experts is vital for company success*
- *Q19: I often need to react to things outside of my control*
- *Q22: The office space around me is restricted to people in particular roles or people in more senior roles*

However, the Item-Total Statistics did not indicate that a higher score could be obtained by removing further additional questions. Nevertheless, it is still possible that other combinations of questions would return a higher alpha score and indicate greater consistency across them. Testing this is challenging unless approached systematically, given the numerous possible combinations. Firstly, combinations of consecutive Grid questions were reviewed i.e., Q12-13, Q12-14, Q12-15 etc, and then Q13-14, Q13-15, Q13-16, etc. No other combinations of questions returned a higher alpha than 0.458. Secondly, combinations of non-consecutive Grid questions were analysed to see if the alpha increased beyond 0.458. The Inter-item correlation statistics for the Grid questions indicates the strongest relationships between questions (Table 4.11). Six questions returned relatively strong inter-item correlations of above 0.2 with at least one other question:

- *Q12: My grade / seniority and role in the company determines how I should act*
- *Q13: I change my approach to dealing with people depending on whether they are more senior or junior than me*
- *Q14: I have a highly defined role with a very distinct set of responsibilities*
- *Q16: I tend to work within the boundaries of my role*
- *Q20: I stick to processes, procedures and standards in the way I perform my role*
- *Q21: In my team, if processes, procedures or standards are not adhered to, action will be taken to find out why*

Together, these six questions return an alpha score of .468, which is higher but still does not reach traditional levels of acceptability. Table 4.11 also indicates that there are some negative correlations between these six items, for example, between Q12 and Q20. The 'Alpha if Item Dropped' column highlighted that removing Q12 and Q13, bringing the total down to four questions, produces the highest alpha score of .549. The four remaining questions (Q14, 16, 20, 21) relate to the following of processes, management of anomaly, and role definition.

- *Q14: I have a highly defined role with a very distinct set of responsibilities*
- *Q16: I tend to work within the boundaries of my role*

- *Q20: I stick to processes, procedures and standards in the way I perform my role*
- *Q21: In my team, if processes, procedures or standards are not adhered to, action will be taken to find out why*

This means that the four Grid questions that return the highest internal consistency involve the Grid predicates sourced from Gross & Rayner (Q14 and Q16) and Hampton's work (Q20), along with one of the questions developed by the researcher (Q21). The underlying predicates relate to:

- Q14: Specialisation (Gross & Rayner)
- Q16: Entitlement (Gross & Rayner); Limited areas of responsibility (Hampton)
- Q20: Rules and regulation at work (Hampton)
- Q21: Management of anomaly-classification (self-developed)

These results show there is limited consistency between the Grid predicates proposed by Gross & Rayner and Hampton in their original studies. The alpha scores for questions grouped according to Gross & Rayner and Hampton's Grid predicates are indeed lower than the overall alpha score for this study being -0.344 and 0.247 respectively. This implies that the predicates proposed by Gross & Rayner and Hampton respectively do not measure the Grid dynamic as a unidimensional latent variable. This is particularly significant for Gross & Rayner whose detailed theoretical constructs of Group and Grid are untested. An alternative possibility is that this is not an issue of consistency between the predicates but that the question wording does not accurately reflect Gross & Rayner and Hampton's predicates and needs to be differently worded to better capture the underlying item and generate a higher alpha score. This will be considered in more depth in chapter 6, on NDIT research methodology, and chapter 7, which revisits Douglasian theory considering the results of this study.

Table 4.10: Grid Questions Cronbach Alpha Score

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.427	.419	11

Table 4.11: Grid Questions Inter-Item Correlation

Inter-Item Correlation Matrix

	My grade (seniority) and role in the company determines how I should act	I change my approach to dealing with people depending on whether they are more senior or junior than me	I have a highly defined role with a very distinct set of responsibilities	Getting input from the right experts or specialists is vital in achieving company goals	I tend to work within the boundaries of my role	I normally receive formal performance feedback at specific times, rather than informal feedback delivered 'in the moment'	My team tend to take direction from senior management on what to do rather than deciding ourselves	I often need to react to things over which I have little control	I stick to processes, procedures and standards in the way I perform my role	In my team, if processes, procedures or standards are not adhered to, action will be taken to find out why	The office space around me is restricted to people in particular roles or by people in more senior roles
My grade (seniority) and role in the company determines how I should act	1.000	.259	.076	.056	.094	.134	.143	.053	.045	.044	.053
I change my approach to dealing with people depending on whether they are more senior or junior than me	.259	1.000	-.101	.029	.057	.120	.107	.112	.035	-.005	.040
I have a highly defined role with a very distinct set of responsibilities	.076	-.101	1.000	.059	.244	-.011	-.065	-.147	.288	.260	.050
Getting input from the right experts or specialists is vital in achieving company goals	.056	.029	.059	1.000	.058	-.119	-.042	-.009	.067	.141	-.042
I tend to work within the boundaries of my role	.094	.057	.244	.058	1.000	.144	.097	-.103	.264	.078	.026
I normally receive formal performance feedback at specific times, rather than informal feedback delivered 'in the moment'	.134	.120	-.011	-.119	.144	1.000	.116	.087	.085	-.118	.121
My team tend to take direction from senior management on what to do rather than deciding ourselves	.143	.107	-.065	-.042	.097	.116	1.000	.126	.073	-.054	.084
I often need to react to things over which I have little control	.053	.112	-.147	-.009	-.103	.087	.126	1.000	-.040	-.110	.127
I stick to processes, procedures and standards in the way I perform my role	.045	.035	.288	.067	.264	.085	.073	-.040	1.000	.295	.047
In my team, if processes, procedures or standards are not adhered to, action will be taken to find out why	.044	-.005	.260	.141	.078	-.118	-.054	-.110	.295	1.000	-.044
The office space around me is restricted to people in particular roles or by people in more senior roles	.053	.040	.050	-.042	.026	.121	.084	.127	.047	-.044	1.000

Table 4.12: Grid Questions Item-Total Statistics

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
My grade (seniority) and role in the company determines how I should act	42.76	37.043	.247	.107	.370
I change my approach to dealing with people depending on whether they are more senior or junior than me	43.26	40.185	.168	.102	.401
I have a highly defined role with a very distinct set of responsibilities	42.56	38.977	.166	.184	.402
Getting input from the right experts or specialists is vital in achieving company goals	40.51	44.247	.045	.042	.431
I tend to work within the boundaries of my role	42.71	37.664	.251	.138	.370
I normally receive formal performance feedback at specific times, rather than informal feedback delivered 'in the moment'	42.86	38.890	.159	.097	.405
My team tend to take direction from senior management on what to do rather than deciding ourselves	42.71	40.213	.155	.068	.405
I often need to react to things over which I have little control	41.51	43.205	.027	.074	.443
I stick to processes, procedures and standards in the way I perform my role	41.73	38.435	.310	.189	.359
In my team, if processes, procedures or standards are not adhered to, action will be taken to find out why	42.00	40.930	.104	.157	.423
The office space around me is restricted to people in particular roles or by people in more senior roles	43.39	39.296	.122	.040	.420

Finally, it is worth assessing to what extent seniority in the UK Insurer influences the way individuals experience the Grid dynamic, and whether this has impacted how questions are answered. It could be possible that some elements of the Grid dynamic, for example, adherence to rules and processes, or adjusting style according to authority, are experienced in a more consistent way across the population grouped by seniority. The analysis below reflects that the alpha consistency differs somewhat according to seniority, with more junior grades reflecting a higher alpha score, than the most senior, with middle managers (grade D) reflecting the lowest alpha score.

Table 4.13: Grid Alpha score by seniority /grade – all questions

Grade (seniority)	Cronbach's α	# of cases
B	.561	37
C	.497	161
D	.295	181
E	.463	118
F & Director	.301	36

4.3.3 Grid Exploratory Factor Analysis

As with the Group questions, Exploratory Factor Analysis (EFA) was used to explore the constructs underlying the Grid questions, with the outputs detailed below.

The analysis in Table 4.14 and 4.15 above shows the Grid questions possess four latent variables (Components) with Eigenvalues of greater than 1. These are examined in turn below.

Component 1 accounts for almost 17% of variance. The component matrix loadings suggest that the first and largest factor relates to role definition and staying within role boundaries and prescribed procedures. As might be expected, this component encompasses the four questions that yielded the highest alpha score (0.549) in section 4.3.2.1 above. The four questions are:

- *Q14: I have a highly defined role with a very distinct set of responsibilities*
- *Q16: I tend to work within the boundaries of my role*
- *Q20: I stick to processes, procedures and standards in the way I perform my role*
- *Q21: In my team, if processes, procedures or standards are not adhered to, action will be taken to find out why*

Component 2 accounts for almost 15% of variance. This relates to the extent to which seniority of roles impacts the respondent and their interaction with others. The following questions produced a loading of over 0.5, and have an alpha score of 0.411 (which is lower than the alpha score for all Grid questions):

- *Q12: My grade / seniority and role in the company determines how I should act*

- *Q13: I change my approach to dealing with people depending on whether they are more senior or junior than me*
- *Q17: I normally receive formal feedback at specific times rather than informal feedback delivered 'in the moment'*
- *Q18: My team tend to take direction from senior management rather than deciding what to do ourselves*

Component 3 accounts for almost 11% of the variance. This relates most strongly to the role of experts in the organization, and to an extent the role of senior individuals too. The following question produced a loading of over .5:

- *Q15: Getting input from the right experts or specialists is vital in achieving company goals*

Component 4 accounts for 9% of the variance. The fourth factor is harder to interpret but appears to relate most strongly to dealing with events outside of one's control, and the restricted use of office space. In a broad sense this could relate to autonomy over how respondents use their time and space around them. The following questions produced a loading of over .5:

- *Q18: I often need to react to things over which I have little control*
- *Q22: The office space around me is restricted to people in particular roles or people in more senior roles*

The higher number of component variables (4 Components) for the Grid questions suggests that either the questions have not been wholly successful in identifying the Grid component, or, the Grid dimension is inherently more complex than Group, which has implications for NDIT theory. This is explored further in the next section.

Table 4.14: Grid Questions Exploratory Factor Analysis

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.826	16.598	16.598	1.826	16.598	16.598
2	1.639	14.902	31.500	1.639	14.902	31.500
3	1.161	10.555	42.055	1.161	10.555	42.055
4	1.024	9.308	51.363	1.024	9.308	51.363
5	.917	8.332	59.695			
6	.881	8.007	67.703			
7	.844	7.672	75.374			
8	.769	6.995	82.369			
9	.730	6.640	89.009			
10	.610	5.547	94.557			
11	.599	5.443	100.000			

Extraction Method: Principal Component Analysis.

Table 4.15: Grid Questions EFA Component Matrix

Component Matrix[a]

	Component			
	1	2	3	4
My grade (seniority) and role in the company determines how I should act	.236	.510	.391	-.222
I change my approach to dealing with people depending on whether they are more senior or junior than me	.049	.544	.468	-.211
I have a highly defined role with a very distinct set of responsibilities	.678	-.160	-.195	.085
Getting input from the right experts or specialists is vital in achieving company goals	.251	-.144	.603	.216
I tend to work within the boundaries of my role	.578	.205	-.229	-.276
I normally receive formal performance feedback at specific times, rather than informal feedback delivered 'in the moment'	.074	.566	-.379	-.213
My team tend to take direction from senior management on what to do rather than deciding ourselves	.047	.528	-.018	.047
I often need to react to things over which I have little control	-.264	.435	.136	.553
I stick to processes, procedures and standards in the way I perform my role	.695	.083	-.112	.166
In my team, if processes, procedures or standards are not adhered to, action will be taken to find out why	.590	-.252	.263	.215
The office space around me is restricted to people in particular roles or by people in more senior roles	.047	.368	-.301	.611

Extraction Method: Principal Component Analysis.

a. 4 components extracted.

4.3.4 Implications of Low Grid Alpha and multiple EFA variables

The low Grid alpha score (0.423 for all; 0.549 for a subset of four closely related questions) and the four Components within the Exploratory Factor Analysis (EFA) generates questions about the nature of Grid and the suitability of the survey instrument in measuring it. The following section argues that the alpha score for Grid is less than 0.7 does not necessarily imply the question set is unreliable in measuring Grid, and that the survey instrument and data set remain suitable to determine thought-styles and achieve the aims of this research.

Firstly, whether the Grid dynamic is unidimensional (comprised of a single underlying variable) or multidimensional (comprised of multiple underlying variables) remains open to debate amongst Douglasian scholars. If Grid is a multidimensional concept, then a lower alpha score can be expected because individuals may answer the questions differently according to which elements of Grid they experience, and it does not mean that the questions have been unsuccessful in capturing the dynamic. Furthermore, Douglasian theory expects that both Group and Grid are experienced differently by different people within an organisational setting (the alpha scores by seniority in table 4.13 suggest this is the case), and again some variance in the alpha score for Group or Grid can be expected. Finally, the spread of responses across both the Group and Grid questions allows for the 'requisite variety' to derive four thought-styles, despite the variance in Cronbach alpha scores. In this respect, the survey instrument has been successful because it allows the aims of this research to be achieved.

Whilst it is argued that the survey instrument and the data set is sufficient to achieve the aims of this research, it is accepted that further reflection is needed on the implications of the low Grid alpha score for the components of this question set, both in terms of Douglasian theory and NDIT research methodology. This is a focus in chapters 6 and 7.

The process for determining thought-styles from the responses to the Group and Grid questions must however consider the low Grid alpha scores, and this is the focus of the next section.

4.4 Grid and Group Question Thought-Style Calculation

To determine worldviews across the UK Insurer, consideration was given in chapter 3 about how to translate the Group and Grid question data into the NDIT thought-styles, and a methodology provided in section 3.6.2. To recap, the approach is as follows:

- The mean for each Group and Grid question is obtained. Each mean is then rounded either up or down to the nearest full integer. (For example, if a question mean is 3.20 this would be rounded to 3. It is necessary to round the mean up or down because the responses are full integers (1-7), so question responses need to be sorted on that basis.)
- For everyone, their response to each Group and Grid question is assigned a binary number (0 or 1) depending on whether it is higher or lower than the mean for the question. If the response is at or below the question's overall mean, then a score of 0 is recorded for that individual participant and for that question. If the response is above the mean, then a score of 1 is recorded.
- This then produces for each respondent a set of 0s or 1s for the Group questions and another set for the Grid questions.
- For everyone, overall Group and Grid scores are then calculated by adding the 0s and 1s and then dividing by the number of questions for Group and Grid (11 questions for each) to obtain a percentage. This gives one percentage score for Group and one percentage score for Grid per respondent, ranging from 0 to 100%.
- Respondents can then be individually positioned on the Grid-Group diagram by reference to whether their Group and Grid scores are above or below a mean of 50%.

Before these calculations are performed, a decision is required about whether to use all Group and Grid questions to calculate the NDIT thought-styles. Given the mixed Cronbach alpha scores and multiple EFA Components, it may be more theoretically sound to use subset of questions that have higher internal consistency and relate to the largest EFA components. The merits of both options are explored in the next section.

4.4.2 Determining Thought-Styles from the Group and Grid questions – Three Options

The next section presents three options for determining thought-styles from the Group and Grid questions, and evaluates whether question selection makes a material difference to the thought-style depiction in the UK Insurer. Three alternatives (labelled 'views' in the following discussions) have been prepared to see whether this is the case:

- View 1: Uses all Group and all Grid questions (22 in total).
- View 2: Uses 10 Group questions associated with the Group EFA Component 1, and 4 Grid questions associated with Grid EFA Component 1.
- View 3: Uses 10 Group questions associated with the Group Component 1, and 4 Grid questions associated with the Grid EFA Component 2.

For each of View 1, View 2 and View 3 - the individual's responses have been positioned on the Grid-Group matrix using the process explained in section 4.4.1. Table 4.17 summarises the overall percentage of individuals who have been positioned within each of the four thought styles on the Grid-Group matrix; for example, 55% of all respondents have been identified as Hierarchist under View 1 (which uses all 22 Group and Grid Questions) whereas 39% of all respondents have been identified as Hierarchist under View 2 (which uses 10 Group and 4 Grid questions as explained above).

Table 4.17: A comparison of Group and Grid question-derived thought-styles

	View 1	**View 2**	**View 3**
High Grid; High Group (Hierarchist)	55%	39%	30%
Low Grid; High Group (Enclavist)	21%	30%	39%
High Grid; Low Group (Isolate)	17%	13%	15%
Low Grid; Low Group (Individualist)	7%	18%	16%

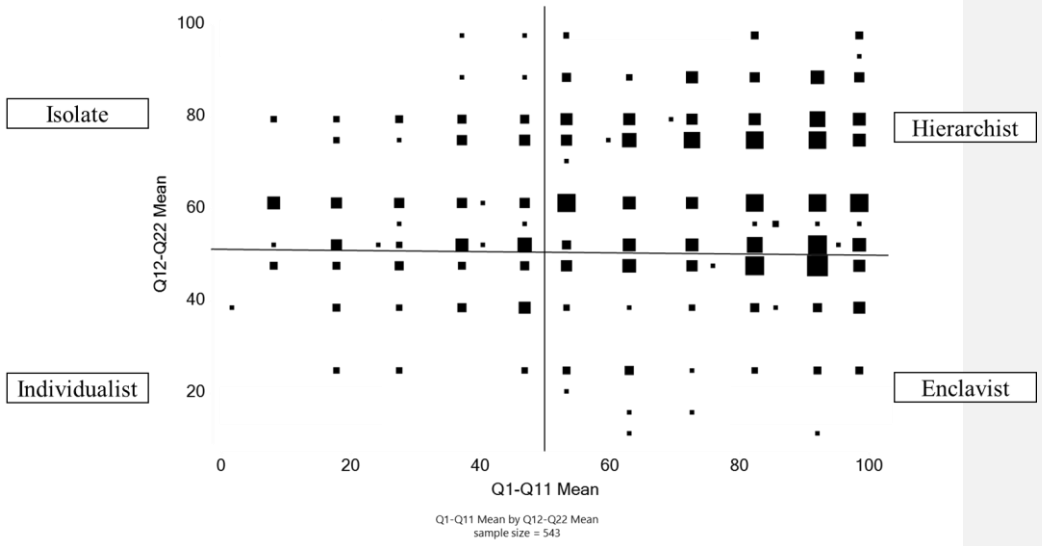
A comparison of the three views shows there is a moderate impact when reducing the number of Group and Grid questions used to derive the thought-styles. For both View 1 and View 2, the dominant culture is reflected as Hierarchism and is followed by the Enclave culture. For View 3 this order is reversed. Removing over half of the Grid questions has reduced the proportion of respondents that can be considered Hierarchist and to a lesser extent Isolate, but has increased the proportion of Enclavist and Individualist respondents.

Careful consideration needs to be given as to whether one of the three views provides a more reliable representation of the UK insurer's cultural mix and, relatedly, what the benefits of adopting one View in preference to another might be. View 2 returns a slightly higher alpha score for the Grid questions, by including fewer Grid questions in the analysis. However, selecting View 2 involves a theoretical compromise because the discarded questions are associated with predicates that could be integral to the Grid dynamic. Furthermore, altering the Grid question set by removing predicates to improve consistency may not significantly affect the results or conclusions drawn as part of this study. Overall, the evidence appears to support that the dominant culture in the UK Insurer is most strongly aligned to Hierarchism, with the Enclavist culture secondary, and the other two thought-styles (Isolates and Individualism) representing smaller but nevertheless relatively significant elements of the UK Insurer's cultural mix. The alpha score for the Grid questions in View 3 is lower than View 1 and, therefore, there is no advantage in terms of consistency in selecting this option.

Therefore, it is proposed that View 1 provides a sufficiently reliable representation of the UK insurer's cultural mix for the risk culture discussions in subsequent chapters. View 1 retains all Grid questions and Group questions. Whilst the alpha score for the Grid questions underpinning View 2 is marginally higher than for View 1, removing the 7 Grid questions does not dramatically change the distribution of respondents across the thought styles. Consequently, removing seven of the 11 Grid questions in exchange for only slightly improved internal consistency involves substantial theoretical compromise on the underlying elements of Grid. Furthermore, it remains possible that the Grid dimension (and potentially also Group) impact individuals in the UK Insurer in diverse way, as Douglasian scholars would predict.

A quantised scatterplot covering all Group and Grid questions (i.e., View 1) is below; this been generated in Excel using the percentage of Group and Grid questions answered positively by each respondent. This visually represents the distribution of thought-styles. Each of the shaded areas indicates concentrations of survey respondents who returned that Group and Grid overall score. This further illustrates the overall bias towards Hierarchism in the UK Insurer.

Figure 4.1: Quantised Scatterplot – Group and Grid Question Derived Thought-Styles



Now that the analysis for part 1 of the survey is complete (the Group and Grid questions), and a view of NDIT thought-styles has been obtained, this chapter now moves on to analyse part 2 of the survey – the ranked risk statements and the risks ranked in order of importance.

4.5 Thought-Style Risk Statement Results (Survey Part 2)

Part 2 of the survey comprised two sections, the first of which asked participants to rank the risk statements aligned to the four NDIT thought-styles. This is the second method of determining the NDIT thought-style of the sample population. 497 respondents of the 543 who completed the survey indicated their preferred risk statement. The results of testing using this second method are provided in the second column of table 4.18. The third column of the table provides the View 1 results from the first part of the survey as discussed in the prior sub-section. When respondents were asked about their preferred approach to risk management, a clear Hierarchist bias in the UK Insurer is again revealed - and this accords with dominant Hierarchist bias identified via the first part of the survey. Likewise, the Enclavist thought-style has the next highest percentage of respondents. However, a higher proportion of Individualists were identified in the UK Insurer via this second method of determining NDIT thought-styles. The thought-style risk statements are cross-tabulated with the Group and Grid derived thought-style for comparison in the next section (table 4.19).

Table 4.18: Preferred Risk Statement

Preferred Risk Statement	% of total from Risk Statement (part 2 of the survey)	% from Group & Grid questions (part 1 of the survey)
Hierarchist	44%	55%
Enclavist	28%	21%
Individualist	21%	7%
Isolate	7%	17%

4.6 Data cross-tabulation for part 1 and part 2 of the survey and demographic splits

This section contains cross-tabulated results for each participant which shows the relationship between the thought-styles derived from the Group and Grid questions in the previous section, and the preferred risk thought-style statements. If both part 1 and part 2 of the survey are equally able to identify NDIT thought-styles then an individual identified as Hierarchist in part 1 should also be a Hierarchist in part 2 of the survey. The data assessing this is presented side by side in section 4.6.1. This data will be used in

Chapter 5 and 6 to assess the relationship between Group and Grid and espoused views on risk management, and what these results mean for NDIT research methodology. Section 4.6.2 presents the results of the risk types ranked by respondents, which is then cross-tabulated with the NDIT thought-styles obtained from the Group and Grid questions. Finally, section 4.6.3 presents the NDIT thought-styles obtained from part 1 and part 2 of the survey cross-tabulated by demographics. This is so that analysis can be performed on whether there is any relationship between the characteristics of the respondent and the way they experience Group or Grid, or their tendency to relate to a particular thought-style.

4.6.1 Grid / Group Question Thought-Style and Preferred Risk Thought-Style Statement

Table 4.19 shows the relationship between the thought-styles derived in the previous section from the Group and Grid questions (Part 1 of the survey) and the preferred risk thought-style statement (Part 2 of the survey). It shows that the respondents thought-style identified in part 1 of the survey does not all always accord with part 2 of the survey. For example, of the respondents who were identified as Enclavist in part 1 of the survey, only 28% of them were identified as Enclavist in part 2, and only 3% of Isolates identified in part 1 of the survey were selected as Isolates in part 2.

However, there remains a clear bias towards the Hierarchist statement which aligns with the Hierarchist bias in part 1 of the survey. The implications of the findings in table 4.19 have implications for NDIT research methodology and theory will be explored further in Chapters 6 and 7.

Table 4.19: Grid / Group Question Thought-Style and Preferred Thought-Style Statement

	Group and Grid Question Thought-Style			
#1 Preferred Risk Thought-Style Statement	**Enclavist**	**Isolate**	**Hierarchist**	**Individualist**
Enclavist	28%	24%	30%	22%
Isolate	7%	3%	7%	14%
Hierarchist	36%	44%	47%	42%
Individualist	30%	28%	16%	22%

4.6.2 Grid / Group Question Thought-Style and Ranked Risks

This section reviews the ranking of risks by participants and relationship between ranked risks and thought-styles. Tables 4.20 and 4.21 show the relationship between thought-styles derived from the Group and Grid questions (part 1 of the survey), the percentage of respondents that ranked that risk the

most important risk to the UK Insurer, and the percentage of respondents that ranked each risk in their top 5 of importance (of 10). This enables an assessment to be made about whether the impact of Group and Grid, and the resultant thought-style, correlates with prioritisation of risk. The results show that in the main, the sampled population responded in a similar way when asked to prioritise the risks, with Cyber and Customer Service risks overwhelmingly regarded as the top 2 most important risks for the UK Insurer to manage. The responses in Table 4.20 reveal some low variations to risks ranked in the top 5 for each thought-style.

As the Group and Grid question-derived thought-style is derived through a manual calculation (methodology explained in section 3.7) it is not possible to assess statistical significance of the relationship between the thought-styles and the risk ranking using SPSS techniques such as Pearson correlation. However, from the information presented in tables 4.20 and 4.21 it is not possible to confirm that the different thought-styles possess a significantly different level of interest in certain risks, as NDIT scholars would expect not to be the case.

Table 4.20: Grid / Group Question Thought-Style and Risks Ranked as Most Important

	Group and Grid Question Thought-Style			
Risk Ranked Most Important	**Enclavist**	**Isolate**	**Hierarchist**	**Individualist**
Cyber attack / data loss	31.5%	24.7%	26.9%	38.9%
Data Privacy	9.3%	11.2%	12.6%	8.3%
Emerging and disruptive new competitors	0.9%	2.2%	2.7%	0.0%
Failure to embrace digital innovation	0.0%	0.0%	3.1%	2.8%
Ineffective management of talent / people	3.7%	9.0%	6.8%	5.6%
IT Service disruption	3.7%	5.6%	3.7%	2.8%
Missed strategic or market opportunities	2.8%	4.5%	2.4%	0.0%
Poor customer service	23.1%	21.3%	21.1%	22.2%
Pricing and Profitability	8.3%	11.2%	9.5%	11.1%
Regulatory and Legal change	16.7%	10.1%	11.2%	8.3%

Table 4.21: Grid / Group Question Thought-Style and Risks Ranked in Top 5

	Group and Grid Question Thought-Style			
Risk Ranked in Top 5	**Enclavist**	**Isolate**	**Hierarchist**	**Individualist**
Cyber attack / data loss	80.6%	73.0%	75.5%	83.3%
Data Privacy	72.2%	65.2%	72.4%	69.4%
Emerging and disruptive new competitors	23.1%	31.5%	18.0%	16.7%
Failure to embrace digital innovation	27.8%	31.5%	28.9%	22.2%
Ineffective management of talent / people	37.0%	38.2%	35.7%	47.2%
IT Service disruption	54.6%	56.2%	57.8%	63.9%
Missed strategic or market opportunities	26.9%	37.1%	27.2%	27.8%
Poor customer service	77.8%	75.3%	73.5%	69.4%
Pricing and Profitability	39.8%	37.1%	53.7%	52.8%
Regulatory and Legal change	60.2%	55.1%	57.1%	47.2%

One might predict that risk rankings might be associated with business area - for example, those working in IT might be focused on Cyber risk. For comparative purposes, a Pearson test was run in SPSS to establish if there is a correlation between business area that the respondent works in and their risk rankings. The test did not return any statistically significant results (that would contradict the null hypothesis) and only identified weak relationships between business area and the risks that individuals think are most important. This indicates that role and expertise is not the primary driver of the relative importance of risks within the sampled population.

4.6.3 Demographic Cross-Tabulation

The following section contains the results cross-tabulated by demographic, firstly for part 1 of the survey (Group and Grid-derived thought-style) and then part 2 of the survey (preferred thought-style statements). This is so that analysis can be performed on whether there is any relationship between the characteristics of the respondent and the way they experience Group or Grid, or their tendency to relate to a particular thought-style. This may have important implications for conducting NDIT research, because demographic variables are not considered by the theory to necessarily impact thought-style.

The demographic splits include gender, grade (seniority), team / function, and location. The breadth of data collected for ethnicity was not sufficient for meaningful analysis. A small minority of respondents chose not to provide demographic data, and their responses are not shown in the numbers below.

Table 4.22 Group / Grid Thought-style by Grade (seniority)

	Group / Grid Thought-style				
Grade	**Enclavist**	**Isolate**	**Hierarchist**	**Individualist**	**Number of responses**
A	0%	25%	75%	0%	4
B	24%	27%	46%	3%	37
C	19%	17%	54%	9%	162
D	16%	19%	58%	8%	180
E	26%	17%	51%	6%	118
F	28%	3%	66%	3%	32
SMG/Director	25%	0%	50%	25%	4

Table 4.23: Group / Grid Thought-style by Gender

	Group / Grid Thought-style				
Gender	**Enclavist**	**Isolate**	**Hierarchist**	**Individualist**	**Number of responses**
Female	52%	45%	52%	42%	225
Male	48%	55%	48%	58%	292

Table 4.24: Group / Grid Thought-style by Business Area

	Group and Grid Thought-style				
Business Area	**Enclavist**	**Isolate**	**Hierarchist**	**Individualist**	**Number of responses**
Trading Unit: Asset Management					
Investors	0%	33%	67%	0%	3
Trading Unit: General Insurance					
Claims	20%	20%	47%	13%	15
Governance	14%	43%	43%	0%	7
Performance & Personal Lines	0%	50%	50%	0%	4

Personal Lines Underwriting	8%	46%	31%	15%	13
Product and Propositions	38%	8%	54%	0%	13
SME Trading	20%	20%	55%	5%	20
Transformation	0%	0%	100%	0%	2
Corporate Speciality	0%	20%	60%	20%	5
Trading Unit: Life & Pensions					
Corporate	5%	15%	70%	10%	20
Health & Protection	23%	14%	57%	5%	56
Savings & Retirement	17%	24%	54%	5%	41
Strategic Partners	67%	0%	33%	0%	3
Life CEO Office	0%	0%	75%	25%	4
UK Functions					
UK CIO	23%	5%	55%	18%	22
UK COO	26%	9%	60%	6%	47
UK Finance	15%	19%	60%	6%	47
UK Internal Audit	0%	100%	0%	0%	2
UK Legal	0%	25%	75%	0%	4
UK People Function	36%	0%	64%	0%	11
UK Risk	17%	17%	67%	0%	36
Data Science	33%	33%	33%	0%	6
Group Functions					
Group - Chief Ops & IT Officer/Central Office	15%	15%	54%	15%	13
Group - CISO	19%	4%	65%	12%	26
Group - Corporate Security	0%	0%	100%	0%	4
Group - CRO	0%	33%	67%	0%	3
Group - Data Governance	0%	0%	100%	0%	4
Group - General Counsel	50%	50%	0%	0%	2
Group - Global Delivery Director	100%	0%	0%	0%	2
Group - Global Digital Factory	0%	38%	38%	25%	8
Group - Internal Audit	0%	50%	0%	50%	2
Group - IT (Inc Platforms)	29%	19%	43%	10%	42
Group - IT Risk & Assurance	18%	9%	73%	0%	11
Group - People Function	0%	0%	100%	0%	1
Group - Procurement	0%	0%	100%	0%	1

Table 4.25: Group / Grid Thought-style by Location

	Group and Grid Thought-style				
Office Location	**Enclavist**	**Isolate**	**Hierarchist**	**Individualist**	**Number of responses**
Birmingham	0%	0%	100%	0%	2
Bishop Briggs	0%	0%	80%	20%	5
Bristol	20%	13%	63%	4%	46
Eastleigh	25%	10%	65%	0%	20
Glasgow	33%	33%	0%	33%	3
Home-Worker	18%	32%	46%	4%	28
Leeds	0%	0%	100%	0%	1
London - Digital Garage	50%	17%	33%	0%	6
London - St Helen's	18%	25%	50%	7%	28
Manchester	0%	0%	100%	0%	1
Norwich	20%	21%	50%	10%	189
Other	27%	9%	55%	9%	11
Perth	23%	27%	40%	10%	30
Sheffield	10%	17%	73%	0%	41
Worthing	0%	0%	100%	0%	1
York	24%	8%	60%	8%	115

Preferred Risk Statement Demographic splits

Table 4.26: Preferred Risk Statement by Gender

	Preferred Risk Statement				
Gender	**Enclavist**	**Isolate**	**Hierarchist**	**Individualist**	**Number of responses**
Female	55%	59%	53%	35%	225
Male	45%	41%	47%	65%	292

Table 4.27: Preferred Risk Statement by Grade

Grade	Enclavist	Isolate	Hierarchist	Individualist	Number of responses
A	100%	0%	0%	0%	2
B	35%	16%	19%	29%	31
C	24%	8%	49%	20%	148
D	26%	5%	51%	17%	167
E	31%	5%	37%	27%	113
F	32%	7%	36%	25%	28
SMG/ Director	50%	0%	25%	25%	4

Table 4.28: Preferred Thought-style Statement by Business Area

	Group and Grid Thought-style				
Business Area	**Enclavist**	**Isolate**	**Hierarchist**	**Individualist**	**Number of responses**
Trading Unit: Asset Management					
Investors	0%	0%	100%	0%	2
Trading Unit: General Insurance					
Claims	14%	7%	50%	29%	14
Governance	43%	0%	29%	29%	7
Performance & Personal Lines	50%	0%	25%	25%	4
Personal Lines Underwriting	17%	8%	42%	25%	12
Product and Propositions	33%	8%	25%	33%	12
SME Trading	47%	6%	29%	18%	17
Transformation	100%	0%	0%	0%	2
Corporate Speciality	14%	7%	50%	29%	14
Trading Unit: Life & Pensions					
Corporate	17%	0%	61%	22%	18
Health & Protection	19%	4%	51%	26%	47
Savings & Retirement	35%	14%	38%	14%	37
Strategic Partners	0%	0%	50%	50%	2
Life CEO Office	75%	0%	25%	0%	4
UK Functions					
UK CIO	15%	20%	40%	25%	20
UK COO	28%	5%	53%	14%	43
UK Finance	36%	4%	40%	20%	45
UK Internal Audit	0%	0%	100%	0%	2
UK Legal	100%	0%	100%	0%	2

UK People Function	40%	10%	40%	10%	10
UK Risk	29%	0%	51%	20%	35
Data Science	0%	0%	60%	40%	5
Group Functions					
Group - Chief Ops & IT Officer/Central Office	25%	0%	58%	17%	12
Group - CISO	29%	8%	50%	13%	24
Group - Corporate Security	25%	0%	50%	25%	4
Group - CRO	100%	0%	0%	0%	3
Group - Data Governance	0%	0%	67%	33%	3
Group - General Counsel	0%	0%	0%	100%	1
Group - Global Delivery Director	50%	0%	0%	50%	2
Group - Global Digital Factory	38%	0%	63%	0%	8
Group - Internal Audit	0%	50%	50%	0%	2
Group - IT (Inc Platforms)	21%	12%	36%	26%	42
Group - IT Risk & Assurance	9%	18%	45%	27%	11
Group - People Function	0%	0%	0%	100%	1
Group - Procurement	100%	0%	0%	0%	1

Table 4.29: Preferred Thought-Style Statement by Location

Location	Enclavist	Isolate	Hierarchist	Individualist	Number of responses
Birmingham	100%	0%	0%	0%	1
Bishop Briggs	0%	0%	60%	40%	5
Bristol	31%	7%	36%	26%	42
Eastleigh	17%	6%	50%	28%	18
Glasgow	67%	0%	33%	0%	3
Home-Worker	21%	4%	46%	29%	24
Leeds	0%	0%	100%	0%	1
London - Digital Garage	33%	0%	17%	50%	6
London - St Helen's	27%	4%	38%	31%	26
Manchester	0%	0%	100%	0%	1
Norwich	25%	6%	40%	19%	189
Other	33%	11%	56%	0%	9
Perth	18%	4%	50%	29%	28
Sheffield	29%	8%	45%	18%	38
Worthing	0%	0%	0%	100%	1
York	34%	9%	42%	15%	109

4.7 Qualitative Data Analysis

This section presents analysis of the qualitative feedback from part 3 of the survey. As the third means of determining NDIT thought-styles in the surveyed population, findings from the qualitative feedback are detailed in section 4.7.1. The qualitative feedback also provides insight into how each NDIT thought-style thinks about risk. Section 4.7.2 presents sentiment and language analysis of the qualitative comments, which are then explored in detail in chapter 5.

4.7.1 Survey Comment Thought-Style Coding

106 qualitative comments were returned in response to the question: *Do you have any feedback about how this company manages risk?* Six responses were unusable as they contained insufficient detail for alignment to one of the NDIT thought-styles. These have been omitted, leaving 100 usable comments. Of these 100 comments, a further eight were discounted as the sentiment expressed was too ambiguous to allocate a thought-style against the criteria in *Appendix 6*. This left 92 comments for analysis.

A comparison of the NDIT thought-style obtained from the qualitative comments and the thought-style from the Group and Grid questions is detailed in Table 4.30 below.

Table 4.30: Group and Grid thought-style and qualitative comment thought-style

	Group and Grid Question Thought-Style				
Qualitative Comment-derived Thought-style	**Enclavist**	**Isolate**	**Hierarchist**	**Individualist**	**Total**
Enclavist	33%	12%	24%	33%	25%
Isolate	0%	12%	9%	0%	7%
Hierarchist	29%	24%	38%	33%	33%
Individualist	38%	53%	29%	33%	36%

The results show that, as with the risk statements, there is an inconsistent relationship between the Group and Grid question-obtained thought-style and the thought-style obtained by the qualitative comments. Respondents were more likely to return a comment that appears to be Individualist in nature – this contrasts with the Hierarchist bias present in the other sources of data. This outcome has implications for NDIT research methodology which will be discussed in chapter 6.

4.7.2 Sentiment, Language and Word Frequency Analysis

Analysis of the sentiment and language used by respondents in the UK Insurer provides greater detail about how each NDIT thought-style thinks about risk management. This section presents both coded sentiment and analysis of word type and word frequency, so that commonalities and differences between the four thought-styles can be identified.

Table 4.31 presents each of the coded qualitative comments against themes derived from detailed review of the sentiment. The first theme relates to a broad sentiment. Then each code theme contains sub-themes that represent sentiments at a more detailed and nuanced level. All sentiments relate to respondents opinions on how risk is managed in the UK Insurer and have been cross-tabulated with the NDIT thought-styles derived from the Group and Grid questions. This reveals areas of commonality and difference.

A high proportion of comments are critical of the way risk management is conducted across the UK Insurer, with the most common concerns regarding complexity, processes, and that current practices are not effective in managing risk (see table 4.3.1). The prevalence of negative responses is consistent across each thought-style, including those that operate within a high Grid environment – Hierarchists and Isolates. Overall, the sentiment analysis suggests that different attitudes towards risk management exist in the surveyed population, and whilst further discussion will be provided in chapter 5, it appears that the sentiments align somewhat with what NDIT would predict.

Eight comments provided feedback on the management of IT, data or Cyber related risk. The focus on these risk types is consistent with the results of the risk ranking (Tables 4.20 and 4.21) where Cyber risk was typically ranked the most important risk for the UK Insurer to manage.

Table 4.31: Coded Sentiments and frequency by thought-style

Code Theme	Sub-Code	Comment Example	Enclavist		Isolate		Hierarchist		Individualist		Total count
			Count	% of total	Count	% of total	Count	% of total	Count	% of total	
Criticism: Inefficiency	Too process, documentation driven	*In my opinion we are far to focussed on risk procedures and not on managing risks and controls within each team.*	6	22%	5	28%	9	19%	1	17%	21
	Wasteful	*Too bureaucratic*	5	19%	3	17%	5	10%	2	33%	15
	Inconsistent	*It's not consistent across the business; some areas are risk aware and risk focussed, others far less so.*	4	15%	2	11%	9	19%		0%	15
	Complex	*The whole framework is overly complex*	3	11%	2	11%	4	8%	1	17%	10
	Accountability is unclear	*Too many individuals without clearly defined roles causing complex approval layers*	9	33%	2	11%	4	8%	1	17%	16
Criticism: Ineffective	Risk management treated as 'box ticking'	*It can sometimes seem like a box ticking exercise.*	2	7%	1	6%	6	13%	0	0%	9
	Set procedures are not effective in managing risk	*Risk management should align with corporate strategy. The company traditionally hasn't done this well enough and right now seems rather aimless*	3	11%	2	11%	3	6%	0	0%	8
	Takes a narrow perspective	*We still too often think of risks too narrowly, and don't fully consider impacts on other areas*	1	4%	0	0%	4	8%	1	17%	6
	Too reactive not proactive	*too reactive with lots of shouting and why did this happen.*	2	7%	0	0%	4	8%	1	17%	7
	'Rules' unclear	*Often hard to obtain a clear steer or balanced direction atleast which can add more time into the process.*	3	11%	0	0%	3	6%	0	0%	6
	Incompatible with other organisational goals	*are too focussed on risk to the point we are a risk management company rather than a Insurance company.*		0%	1	6%	3	6%	0	0%	4
	Prefers tailored approaches to risk management	*a one size fits all doesnt work for risk management*	2	7%	0	0%	0	0%	1	17%	3
Criticism: Prevents opportunity	Prevents innovation / commerciality / opportunity	*We are effectively strangling ourselves but are seemingly unaware of it.*	5	19%	4	22%	7	15%	1	17%	17
Criticism of groups / individuals	Critical of Risk or Compliance function	*I think we have a large Group and 2nd Line Risk function which does not always deliver what the business needs.*	5	19%	4	22%	2	4%	0	0%	11
	Critical of senior leader attitude in response to risks	*management are more worried about risk events being captured than to log them and put measures in place to resolve them.*	3	11%	0	0%	2	4%	1	17%	6
Criticism: Organisational behaviour	Data and documents 'hide' real risk and control picture	*detail beneath greeen ticks on spreadsheets could catch us out.*	2	7%	3	17%	4	8%	1	17%	10
	Company is too risk averse	*The company defaults to a zero-risk basis wherever it can.*	2	7%	3	17%	4	8%	1	17%	10
	Environment suppresses problems / drives wrong	*the need to have risks within tolerance drives the wrong behaviours.*	1	4%	4	22%	1	2%	0	0%	6
	Concerned risk is a source of blame	*It is often still seen as a beurocracy or blame game*	0	0%	2	11%	3	6%	0	0%	5
	Insufficiently collaborative	*We have still got a long way to go till it is an open culture of risk management and collaboration, it still feels that risk can hold us back from innovation or is trying to "catch us out"*	0	0%	2	11%	2	4%	0	0%	4
	Concerned about cost reduction impacting risk management	*This will become even more pronounced in the current cost reduction environment where we'll have less people to do the same work*	0	0%	0	0%	1	2%	0	0%	1
Criticism: Not stringent enough	In favour of more control and caution	*I think awareness is better now than it used to be, but still a long way to go.*	5	19%	0	0%	9	19%	0	0%	14
	Should be part of everyone's roles	*getting better but often an afterthought or deferred to risk to decide how to manage risk*	3	11%	0	0%	3	6%	0	0%	6
	Needs more resources and training to do properly	*we could improve our education for more staff so they are supported to make better risk-based decisions*	1	4%	1	6%	3	6%	0	0%	5
Positive feedback	Confident about current risk management approach	*Well managed. Thorough.*	3	11%		0%	5	10%	0	0%	8
Risk specific	Specific comment about IT or Data Risk	*The IT outages on UK ops are really really annoying customers*	2	7%	0	0%	6	13%	0	0%	8
		Total number of comments for each thought-style	27		18		48		6		

Language and word frequency analysis has been performed by inputting all survey comments categorised by thought-style into NVivo 12 software. All Hierarchist comments have been analysed together, all Individualist comments have been analysed together, and so on. A word frequency table for the top 50 words have been generated for each of the four thought-styles (see Table 4.32). For focused analysis, stemmed words have been grouped, for example, 'risk' and 'risks'. It should be noted that the word frequency count is by number of respondents who have mentioned each word, not the frequency the word appears overall. Some words are also ambiguous in meaning for example, 'better' and 'need' and require direct review of the text to interpret in context. However, some clear differences in word choice and frequency have emerged and are summarised in the table below. The implications of use of language across each thought-style is discussed in detail in chapter 5.

Table 4.32 Group and Grid-derived thought-style and word frequency

	HIERARCHIST			EGALITARIAN			FATALIST			INDIVIDUALIST		
RANK	Word	Count	Weighted Percentage (%)	Word	Count	Weighted Percentage (%)	Word	Count	Weighted Percentage (%)	Word	Count	Weighted Percentage (%)
1	risk	52	6.47	risk	48	8.91	risk	21	8.68	risk	7	10.29
2	managing	13	1.62	managing	13	2.41	Company name	6	2.48	people	3	4.41
3	controls	12	1.49	process	8	1.48	managing	5	2.07	around	2	2.94
4	people	10	1.24	business	7	1.30	rather	5	2.07	feel	2	2.94
5	process	10	1.24	change	7	1.30	company	4	1.65	management	2	2.94
6	business	8	1.00	company	6	1.11	needs	4	1.65	actually	1	1.47
7	time	8	1.00	need	6	1.11	propositions	4	1.65	addressing	1	1.47
8	need	7	0.87	think	6	1.11	right	4	1.65	approriate	1	1.47
9	better	7	0.87	customers	5	0.93	approach	3	1.24	averse	1	1.47
10	things	7	0.87	line	5	0.93	complex	3	1.24	Company name	1	1.47
11	think	7	0.87	often	5	0.93	focus	3	1.24	barrier	1	1.47
12	still	6	0.75	teams	5	0.93	make	3	1.24	bureaucratic	1	1.47
13	used	6	0.75	area	4	0.74	seem	3	1.24	change	1	1.47
14	areas	5	0.62	large	4	0.74	team	3	1.24	company	1	1.47
15	customers	5	0.62	rather	4	0.74	actual	2	0.83	concern	1	1.47
16	deliver	5	0.62	something	4	0.74	business	2	0.83	decisons	1	1.47
17	feels	5	0.62	things	4	0.74	cautious	2	0.83	demotivation	1	1.47
18	framework	5	0.62	time	4	0.74	culture	2	0.83	documented	1	1.47
19	get	5	0.62	understand	4	0.74	customer	2	0.83	doesnt	1	1.47
20	good	5	0.62	working	4	0.74	data	2	0.83	everytime	1	1.47
21	governance	5	0.62	accept	3	0.56	decision	2	0.83	filling	1	1.47
22	icare	5	0.62	adverse	3	0.56	getting	2	0.83	fits	1	1.47
23	make	5	0.62	approach	3	0.56	governance	2	0.83	forms	1	1.47
24	many	5	0.62	clear	3	0.56	improve	2	0.83	high	1	1.47
25	often	5	0.62	consider	3	0.56	looking	2	0.83	increase	1	1.47
26	rather	5	0.62	create	3	0.56	much	2	0.83	interesting	1	1.47
27	sometimes	5	0.62	enough	3	0.56	problems	2	0.83	involving	1	1.47
28	work	5	0.62	failing	3	0.56	process	2	0.83	key	1	1.47
29	change	4	0.50	front	3	0.56	role	2	0.83	leading	1	1.47
30	company	4	0.50	layers	3	0.56	sometimes	2	0.83	less	1	1.47
31	complex	4	0.50	making	3	0.56	spend	2	0.83	level	1	1.47
32	concerns	4	0.50	many	3	0.56	structure	2	0.83	made	1	1.47
33	culture	4	0.50	people	3	0.56	thing	2	0.83	make	1	1.47
34	decision	4	0.50	responsibilit	3	0.56	time	2	0.83	meaning	1	1.47
35	etc	4	0.50	right	3	0.56	within	2	0.83	misses	1	1.47
36	focus	4	0.50	rules	3	0.56	wrong	2	0.83	often	1	1.47
37	focussed	4	0.50	seems	3	0.56	ability	1	0.41	one	1	1.47
38	innovation	4	0.50	seen	3	0.56	accountability	1	0.41	opportunities	1	1.47
39	level	4	0.50	senior	3	0.56	achieving	1	0.41	point	1	1.47
40	practice	4	0.50	sign	3	0.56	action	1	0.41	present	1	1.47
41	seem	4	0.50	sizes	3	0.56	adverse	1	0.41	proactive	1	1.47
42	team	4	0.50	2nd	2	0.37	affects	1	0.41	question	1	1.47
43	term	4	0.50	accountabili	2	0.37	aligned	1	0.41	quite	1	1.47
44	way	4	0.50	across	2	0.37	also	1	0.41	reactive	1	1.47
45	Company name	3	0.37	add	2	0.37	always	1	0.41	redundant	1	1.47
46	aware	3	0.37	also	2	0.37	areas	1	0.41	rely	1	1.47
47	based	3	0.37	always	2	0.37	assessment	1	0.41	seen	1	1.47
48	basis	3	0.37	averse	2	0.37	audit	1	0.41	sickness	1	1.47
49	big	3	0.37	Company name		0.37	averse	1	0.41	situation	1	1.47
50	box	3	0.37	back	2	0.37	avoiding	1	0.41	size	1	1.47

The summary of the qualitative comments – sentiment and language analysis – is discussed in detail in the next chapter, specifically to evaluate the implications of these results for risk management in the UK Insurer and the wider FS industry.

4.8 Conclusion

This chapter has set out the results from each part of the survey and provided brief comment on each, with detailed discussion to follow on implications for risk management in the UK Insurer, NDIT research methodology, and NDIT theory itself. It is evident from these results that the survey has been successful in demarcating respondents into the four NDIT thought-styles, regardless of which of the three methods are used to identify thought-styles (the Group and Grid questions, the risk statements, or the qualitative comments). The qualitative feedback obtained for each thought-style suggests that different attitudes towards risk management exist in the surveyed population, and whilst further discussion will be provided in chapter 5, it appears that the sentiments align somewhat with what NDIT would predict.

The results highlight areas that warrant greater exploration in Chapter 6 and Chapter 7, where the implications of this research on NDIT research methodology and NDIT theory itself will be discussed. Notably, there is an inconsistent relationship between the NDIT thought-styles presented by each of the three methods of determination, which has implications for NDIT research methodology and the theory itself. For example, the thought-styles identified by part 1 (Group and Grid questions) and part 2 (risk statements) of the survey do not exactly align, nor do the thought-styles derived from the qualitative comments align with the thought-styles derived from the Group and Grid questions. Additionally, it is clear from statistical analysis of the Group and Grid questions (namely, assessment of internal consistency using Cronbach's alpha, and Exploratory Factor Analysis (EFA)) that further reflection on the nature of the Grid dimension, and the ability of these survey questions to capture it, is required.

However, the results in this chapter reflect that NDIT is an evolving theory that is subject to continuous discussion and refinement – both in terms of the theory itself and how it should be interpreted and applied, and the accompanying research methodology that can be used to analyse culture using NDIT. Fundamentally however, the results are sufficient to identify four distinct NDIT thought-styles, and provide insight into how each thought-style thinks about risk management. The nature of each NDIT thought-style, and the implications on the UK Insurer and the FS industry will be explored in the next chapter.

CHAPTER 5: Evidencing Risk Cultures within a UK Financial Services Organisation

5.1 Introduction

The overall aim of the thesis, as stated in chapter 1, is to *Investigate risk culture in the Financial Services Industry through employing neo-Durkheimian Institutional Theory by adopting multiple research methods.* The research questions associated with this aim are also set out in chapter 1. This chapter draws on, and analyses, the results presented in chapter 4 to explore and evaluate risk culture(s) in the UK Insurer. More specifically, this chapter addresses the first research question: *What are the risk perceptions and risk cultures present in the FS firm and what are the implications of these risk perceptions and risk cultures for the management of risk within the firm and for the FS industry?* Therefore, the chapter appraises how the four thought-styles as identified in chapter 4 manifest across the organisation to create four distinct risk cultures. By drawing on NDIT, the chapter further considers the implications of the results for the UK Insurer, the wider FS industry and its Regulator.

First, section 5.2 uses the survey data analysed in chapter 4 to evidence the existence of four distinct thought-styles in the UK Insurer, and documents how the four thought-styles manifest across the population's demographic variables. The dominant thought-style is identified in this section as Hierarchism, with Enclavism, Isolates and Individualism being sub-dominant. Section 5.3 discusses each of the four thought-styles identified as existing in the UK Insurer in turn. For each thought-style there is a discussion of how the thought-style perceives risk and the preferences the thought-style has for how risk should be managed. Therefore, this section considers how these four thought-styles can be conceived of as risk cultures and how these risk cultures differ from, and conflict with, one another. This evaluation of how the four thought-styles think about risk draws on the results of the survey including the part 3 qualitative comments returned by survey participants and the content analysis presented in the previous chapter (section 4.7).

Then this chapter considers the practical implications of there being four risk cultures present in the UK Insurer, following the format detailed in previous sections. Section 5.4 assesses how the four risk cultures might impact policy, risk communication (how risk information is communicated and consumed and by whom) and decision-making in the UK Insurer. The impact of four risk cultures on the operation of the Enterprise Risk Management (ERM) framework in the UK Insurer will be considered in depth, arguing that ERM represents a Douglasian classificatory framework perpetuated by ritual which is navigated by each risk culture in a manner that NDIT would predict.

Section 5.5 discusses the potential implications of the results for the FS industry. These discussions are particularly relevant for UK regulators, as they attempt to define, oversee and moderate organisational risk culture in the FS industry to, inter alia, avoid market failures and promote trust in the sector. Finally, section 5.6 assesses the survey results within the context of existing academic research on risk culture in financial services. It is proposed that NDIT provides a definition of risk culture which has broad explanatory power and that the theory and data collection methods from this study are transferable to other firms and contexts.

It is important to note that the study used three methods to determine the risk cultures present within the sample population: a) the scores derived from the eleven Group and eleven Grid questions, b) the four thought-style-aligned risk statements and the ranking of ten risk types according to their perceived importance, and c) the coded qualitative comments. As explained in chapter 4, part 1 of the survey which comprises the eleven Group and eleven Grid questions is considered as being most closely aligned to the foundational concepts of NDIT and mitigates issues of circularity and bias associated with other NDIT research methods. It is therefore considered the primary determinant of the four risk cultures. Nevertheless, this chapter combines insights from across all three parts of the survey as this provides a richer understanding of how risk cultures manifest, and the ways in which risk management is understood and expressed by individuals across the organisation.

5.2 Dominant and subdominant risk cultures: thought style variation

This section discusses the thought-styles present in the UK Insurer as evidenced by the results. NDIT predicts that all four thought styles will be present in any group, organisation or country. The analysis of the results detailed in section 5.2.1 confirms that this holds true for the UK Insurer, both overall and when the population is sub-divided by level of seniority or by business area-department. In addition, section 5.2.1 explains the significance of all four thought-styles being present within the UK Insurer. Section 5.2.2 then identifies which of the four thought-styles is dominant across the organisation.

5.2.1 Thought style variation across and within the sample population

The results for part 1 of the survey show a significant variation in NDIT thought-styles in the UK Insurer. Furthermore, the responses to the Group and Grid survey questions show that the four NDIT thought-styles are present across the whole organisation. Tables 4.22, 4.23, 4.24 and 4.25 in chapter 4 provide the demographic splits for the thought-styles derived from the Group and Grid questions. The tables show that the four thought-styles are both present across the overall sample population, and when the

population is sub-divided with the four thought styles present at each level (or grade) of seniority in the organisation (table 4.22) except for the most junior level and most senior level. With only four returned responses from most junior and senior levels each, the small sample size may plausibly explain why all four thought-styles have not been observed for these two levels.

The results also show that all four thought-styles emerge across departments where 15 or more responses were collected (Table 4.24), and, further, all four emerge at each UK office location where 28 or more responses were collected (Table 4.25). This is significant because it might be assumed that departments and office locations will possess specific ways of organising, which would result in greater homogeneity in the responses to Group and Grid survey questions. For example, it might be assumed that a department such as Internal Audit will be strongly hierarchical as the primary role of Internal Audit is to ensure there is compliance with rules and regulations, and Hierarchists are disposed towards regulation as it is a means of protecting the strong group and strong grid boundaries. Consequently, it might be expected that the Internal Audit Department will seek to recruit those who are supporters of the Hierarchical thought-style. Similarly, it might be assumed that respondents working from the same office buildings (for example, London or York) work in environments that perpetuate similar levels of Group and Grid dynamics in that locality. This is because local customs, influential leaders, and specific office spaces could create and perpetuate ways of organising that directly influence Group and Grid attributes incorporated in the study's survey instrument. However, as the results in Chapter 4 reflect, it does not appear to be the case that specific departments, professions, levels of seniority, or gender, exclusively generate one way of organising and neither do they wholly reject the other ways of organising. Consequently, the results indicate that employees experience the Group and Grid dynamics to varying degrees regardless of their profession, location, or seniority. This observation reflects a fundamental tenet of NDIT - that all four thought-styles will be present in any group setting, and that the social ordering is as likely to be a function of informal arrangements rather than formal.

The results of part 2 of the survey also demonstrate that the four thought-styles are consistently represented across the whole organisation when the risk statements are used to identify thought-styles (Tables 4.26, 4.27, 4.28). Likewise, in respect of the part 2 results, if the sample population is sub-divided based on the risk statements, then again all four thought-styles are present across each grade-level (except for the same two levels of seniority mentioned above where the sample sizes are small), across both genders, and across each business area/department and location where the sample size is greater than 10 responses. This reveals that the requisite variety of four thought-styles can also be obtained when risk statements are used to determine thought-styles. Whilst the method of identifying thought-styles in

respect of part 2 of the survey instrument is ideational, and therefore not aligned to NDIT conceptualisations of social ordering, it is still providing further evidence that the UK Insurer's employee population do not possess homogenous attitudes towards risk management, as all four risk cultures are observable. Part 3 of the survey – the coded qualitative comments – also confirm that all four thought-styles are present in the UK Insurer. However, as the qualitative comments were not obligatory and hence not all respondents provided comments, these have not been sub-divided by demographics. Therefore, in respect of part 3 qualitative comments it is not possible to comment whether they are present in each department or location.

The data set out in chapter 4 (table 4.19 and 4.30) reveals some disparity between the thought-styles derived by the three parts of the survey. The implications of this for NDIT methodology and theory are explored in chapter 6 and 7. However, as previously explained, part 1 of the survey which comprises the eleven Group and eleven Grid questions is most closely aligned to the foundational concepts of NDIT and mitigates issues of circularity and bias associated with other NDIT research methods. It is therefore considered the primary determinant of the four risk cultures, with the other two methods (risk statements and qualitative comments) providing supporting insight into how each thought-style thinks about risk.

5.2.2 Identifying the Dominant Thought-Style

The dominant thought-style within the UK Insurer as identified from the analysis of the results is Hierarchism. The responses to the Group and Grid survey questions in part 1 of the survey instrument (table 4.17) show 55% of survey participants returned higher than average scores to over half of the Group and Grid survey questions and can, therefore, be considered part of the Hierarchist culture. The results of the ranked risk statements in part 2 of the survey instrument also support the conclusion that Hierarchism is the dominant thought-style in the UK Insurer. The implications of Hierarchism being dominant across the organisation will be discussed in section 5.3.

Douglasian theory would also expect that there would be variety even within each of the four thought-styles as the scales are continuous and can be sub-divided. The results indeed show variance across the dominant thought-style in accordance with NDIT. For example, the quantised scatterplot (Fig.4.1) shows that variety exists within the Hierarchist thought-style; namely, this scatterplot reveals there is a smaller proportion of highly Grid orientated individuals, many that are moderately high Grid and high Group and another considerable proportion that sit near the 'boundary' with Enclavism.

The results of the Group and Grid question derived thought-styles (table 4.17) also reveals that Enclavism is the next most prevalent thought-style comprising 21% of the population, followed by Isolates (17%) and Individualism (7%).

5.2.3 Prioritisation of Risk in the UK Insurer

Part 2 of the survey asked respondents to rank risks in order of importance to the UK Insurer. The data reveals that the sampled population demonstrated a tendency to prioritise the same risk types. This is evident in the data in tables 4.20 and 4.21 in chapter 4. As explained in chapter 2, NDIT and Cultural Theory scholars continue to debate whether the four thought-styles view and prioritise risks differently. NDIT maintains that the Group and Grid dynamics inform social organisation and are not ideational (that is, social organisation informs styles of thinking, but it does not determine what people think in respect of content of thought). Therefore, NDIT would consider it is not possible to predict the type of risks that each thought-style will be most interested in. By contrast, many Cultural Theory researchers continue to investigate the relationship between thought-styles and risk types through quantitative research (for example, Dake et al, 2007). Therefore, the relationship between Group and Grid dynamics and prioritisation of risks remains open to debate dependent upon whether a researcher adopts an NDIT or Cultural Theory stance. The results (see tables 4.20 and 4.21 in chapter 4), demonstrate there is no correlation between thought-styles and risks that are considered a priority for the UK Insurer to manage. Therefore, the results of this research do not support the idea that thought-styles will predict types of risks prioritised by individuals and this result is in accord with an NDIT stance rather than a Cultural Theory stance.

The sampled population consider Cyber and Poor Customer Service to be the two most important risks for the UK Insurer, and this is unanimous across all four thought-styles. The high level of consensus across each thought-style that Cyber and Poor Customer Service are the priority risks could most likely be explained by there being a persistent organisational focus on Cyber and Poor Customer Service as key risks that warrant careful management. In recent years, the UK Insurer has made significant investment in the Cyber control environment and enhanced IT security expertise, supported by internal communications campaigns to increase security awareness and due diligence. The UK Insurer's focus on Cyber parallels a heightened focus on Cyber risk within the FS wider industry and the media. Within the FS industry practical solutions have been evolving to meet the threat environment. In addition, there has been increasing involvement from the UKg Regulator in respect of Cyber risk; for example, in 2014 the Bank of England initiated the CBEST programme of penetration testing for FS organisations to assess

their Cyber resilience, and there is ongoing widespread media coverage of Cyber breaches and the resulting impacts on shareholders and customers, such as TalkTalk's customer data breach in 2015. Similarly, risks around poor customer service remain central to the UK Insurer's concerns given the expectation of FS Regulators for firms to treat customers fairly; for example, penalties can be issued for poor customer outcomes and a recent example of this is the £26 million fine imposed in 2020 by the Financial Conduct Authority (FCA) on Barclay's Bank in respect of treatment of consumer credit customers.

However, whilst the surveyed population agree on the priority risks, what cannot be established is whether the advocates of each thought-style possess the same motivations towards managing specific risks. NDIT scholars (in contrast to Cultural Theorists) would assert that the supporters of the four different thought-styles will hold a different view about why these risks should be considered as most important to the UK Insurer. With regards to NDIT both Cyber risk and poor Customer Service could be considered a threat to the perspective and priorities of each thought-style but for very different reasons; for example, Individualists may be concerned that a Cyber attack might impact commercial viability of the business whilst Hierarchists might be more concerned about the reputational and regulatory implications of a Cyber attack. Furthermore, under NDIT each thought-style may have a different view as to how these risks are best managed (if at all). To illustrate, some employees may favour a structured top-down and fully integrative programme of risk mitigation (in accordance with Hierarchist ways of organising), whereas other employees may consider both Cyber and Customer Service risks to be an inevitable part of the business environment and one to which we can only react (in accordance with Isolate ways of organising). Further qualitative research (for example interviews or focus groups with each thought-style) would be required to explore the relationships between thought-style bias and the motivation for prioritising specific risks.

5.3 The four thought-styles and how they think about risk

This section evaluates how the four different thought-styles present themselves within the UK Insurer. Detailed analysis of the thought-styles in respect to risk is required to assess whether the results sufficiently evidence multiple 'risk cultures' in the UK Insurer – this is necessary to demonstrate that NDIT can be used to identify risk cultures within an organisation, and serve as a valuable theoretical framework for understanding risk culture. This section firstly sets out where in the organisation each of the thought-styles reside, evaluates potential demographic influences on thought-styles, and most importantly appraises how each NDIT thought-style thinks about risk as evidenced by the survey data.

This section also considers how each thought-styles interacts with the other three thought-styles – via cultural dialogues - which is important given the functionalist nature of NDIT theory. This section will also evaluate whether each of the four thought-styles as presented in the results is as portrayed within Douglasian literature to date or whether the results indicate important nuances for the UK Insurer and NDIT.

Understanding how each NDIT thought-style manifests as a distinct risk culture is a necessary step before evaluating in section 5.4 how the organisation may be shaped by the presence of multiple risk cultures and what the practical implications are for managing risk frameworks and policy, risk communication (how risk is communicated and consumed and by whom) and dealing with conflict on risk management issues.

The Group and Grid survey questions (part 1 of the survey) are used as the primary determinant of the four thought-styles in the discussion that follows. However, the risk statements and the qualitative comments are also drawn upon as they add further understanding regarding how the four thought-styles manifest as risk cultures and how they think about and respond to risk.

5.3.1 The Hierarchists

The dominant Hierarchist thought-style is present in almost every team and each location (see Tables 4.24 and 4.25) and is equally distributed across both genders. However, the results indicate that there is a greater number of Hierarchists in more senior roles and in some professions. Table 4.22 shows that, with the exception of the most junior and most senior grades (where sample sizes are small) this is the case with 46% of Grade B's compared with 66% of grade F's classified as Hierarchist. Grade F's are heads of function with significant management reach, large teams, and are responsible for role modelling risk and control activity in line with the organisation's ERM framework, whereas Grade B's are junior / entry level staff. Hierarchism is the form of social organisation where social integration and social regulation are both strong. These results might reflect, to a degree, the requirement for holders of senior roles to abide by rules and organisational expectations whilst sustaining collaboration, whilst also requiring others to put the aims of the organisation above personal aims, work collaboratively, and abide by rules set by the organisation and the Regulator. It may also indicate that employees who follow formal and informal rules (such as company traditions) are more likely to be promoted due to having displayed loyalty to the organisation, thereby perpetuating a Hierarchist bias in the UK Insurer.

Although all four thought-styles are present in all departments of 15 responses or more, the data in table 4.24 also highlights a stronger Hierarchist bias across specific departments and professions. This is most pronounced in those that perform a control and oversight role for the Insurer, or whose job it is to engage with multiple departments to ensure that both internal and external rules and regulations are followed – this includes Group HR, Procurement, Legal, IT Risk, Chief Risk Officer team, Chief Information Security Office (CISO). These departments may be displaying a stronger hierarchical bias as there is a greater need for those working within these departments to be willing to follow policies, systems, rules and regulations, and to be able to co-operate and collaborate with others across the organisation, and these attributes are aligned with Hierarchical ways of working. By contrast, teams such as Underwriting, Claims, and IT are dominated by the other three thought-styles and not Hierarchism. A notable exception to the Hierarchist bias within departments that perform a control or oversight role for the UK Insurer is Internal Audit, which did not return dominant Hierarchist scores, and is discussed in the section on Isolates (section 5.4) below.

5.3.2 The Hierarchist approach to risk management

It is evident from the responses to the risk statements and qualitative comments that the respondents who were identified as being associated with a Hierarchist thought-style (that is, as identified by the Group and Grid questions in part 1 of the survey) generally prefer a measured and structured approach to risk management, though there are some intricacies explored below. When ranking the risk statements, the individuals identified as Hierarchists through the Group and Grid questionnaire were most likely to identify with the Hierarchist risk statement (47%) or the Enclavist risk statement (30%). Both the Hierarchist and Egalitarian risk statements reflect a preference for adopting a measured and prudent approach to risk management, with reference to preferring incorporating robust risk frameworks and building consensus. These sentiments accord with what NDIT would predict in that Hierarchists prefer structured approaches to, and collaborative ways of, organising. Hence, Hierarchists would be expected to prefer to have clear procedures and processes in place for managing risk. Furthermore, respondents identified as Hierarchists through the Group and Grid questions were the least likely of all four thought-styles to select the Individualist risk statement (16%). This accords with Douglasian theory, because Hierarchism and Individualism are considered to be strongly opposing thought-styles with the former comprising strong social regulation and social integration whilst the latter comprises weak social regulation and social integration. Hence, Hierarchists would not be expected to display a preference for the Individualist statement. Just 7% of the Hierarchist respondents selected the Isolate risk statement which articulates a preference for allowing those in authority to make decisions and suggests that

regardless of how risk is managed actual outcomes will be unknown and can be due to bad luck or fate. This further emphasises the nature of the Hierarchist thought-style which is committed to the idea that if there is a well-defined risk management system with risk assessments being undertaken with care then risk will be controlled and managed and, further, that in adopting such an approach to risk management luck and fate are eliminated and there is no need to be concerned about unknown outcomes arising.

The Hierarchist attitudes towards risk management are also clearly evident in the qualitative comments. The sentiment coding, as exemplified in the respondent comments below, reveal concerns about internal inconsistencies in respect of how the risk management framework is applied and, additionally, reveal concerns that risk management is being treated as a 'box-ticking exercise' rather than there being a real commitment to the risk management system:

"It [risk management] can be very disconnected between different parts of the company, and we veer wildly from being too process-based to too consensus-based."

"Risk Management can be a little disjointed, which can be down to overlaps in business areas."

"Risks sometimes added to logs as tick box exercise then nothing done about them."

These can be seen to be Hierarchically-rooted concerns for, in NDIT, Hierarchists have a strong preference towards appropriate and well-formed processes being in place, and that these processes are consistently and correctly followed; hence, Hierarchists would be expected to be concerned if they observe any inconsistencies in the risk management framework or if the framework is not being applied diligently.

Hence, it can also be understood why a majority of Hierarchists indicated that they are in favour of more control over risk and that there is a need for greater caution in considerations of risk than is currently in place. Alongside the Enclavist respondents, they were most likely to be in favour of the careful management of risk, specifically thorough the application of appropriate levels of control and oversight. This reflects that, in NDIT, Hierarchists expect the organisation to take risk management seriously and invest in a comprehensive, consistent and meaningful approach to managing risk. Some Hierarchist comments suggest that the current approach is not stringent enough. The following examples convey a sense that more investment should be made to ensure risk management practices are all-encompassing and more consistent:

"[UK Insurer] doesn't give enough resource to risk management. It introduces new products, processes, software, etc without proper consultation."

"we could improve our education for more staff so they are supported to make better risk-based decisions."

Whilst the Hierarchists in the UK Insurer are generally supportive of a robust and consistent approach to risk management, they are also cognisant of the need for efficiency and to ensure the risk management system is not excessive as this can stifle the company commercially. This accords with NDIT which would expect Hierarchists to seek a balance between achieving commercial outcomes and control; that is, there is a need to carefully balance risk-taking and reward (Ingram, Underwood and Thompson, 2014; Thompson, 2018). Hence, some qualitative comments from Hierarchists revealed a concern that risk practices could negatively impact commerciality and innovation:

"The cottage industry of risk management constrains our ability to innovate and challenge the status quo."

"Overbearing internal controls and process stifles rapid innovation."

Whilst not all the qualitative comments of Hierarchists regarding the organisation's risk management processes, rules, and controls was positive, with some describing them as stifling and bureaucratic, the greater part of the Hierarchical sentiment suggests they are prepared to accept that robust risk management systems are needed as this is for the 'greater good'. As NDIT theory would predict, achieving long-term stability through judiciously calculated risk-taking is of outmost importance to this thought-style. The absence of risk management protocols would be a greater threat to the Hierarchist thought-style than a degree of inconvenience and inflexibility to some areas of the business.

Finally, Table 4.31 which shows the frequency of language and terminology by thought-style highlights some words were mentioned only by Hierarchist respondents: 'framework', 'controls' and the proprietary risk management software. As noted above, it is to be expected that Hierarchists will want to have clear frameworks for managing risk with appropriate controls in place. Further, frequent mention of proprietary risk management framework by Hierarchists is as might be expected. Namely, one might expect a considerable proportion of Hierarchists to think and communicate about risk management using the

organisation's official risk terminology as this demonstrates support for the proprietary framework. The proprietary framework used in the organisation is a formal Enterprise Risk Management (ERM) firm-wide framework for identifying and managing risks, and the UK Insurer uses internal terminology which is consistent with typical ERM practices. Thus, an ERM framework carefully balances risk-taking and reward across the whole organisation which accords with the preference of Hierarchists. The use of ERM technical language in the qualitative comments makes Hierarchists distinct from other respondents and may be an attempt to convey an element of support for the ERM framework in their responses. It also further underlines the Hierarchist preference for formality in risk management approaches.

It is possible to extrapolate from the results how Hierarchists relate to the other three thought-styles and reject each other's ways of organising. In managing risk, Hierarchists expect others to embrace prescribed and formal protocols as a way of achieving a controlled and consensus-based approach to risk management. The negative reference to 'box-ticking' above shows that Hierarchists are wary of others engaging with set processes and procedures in a superficial manner. This is at odds with the calculated and consistent approach to risk management preferred by the Hierarchist thought-style and where there is an expectation that individuals will be fully committed to the risk management framework and associated systems. Furthermore, it is likely that the Hierarchist emphasis on top-down structure and formality of the ERM framework will be difficult for the Enclavist and Individualist thought-styles to embrace, due to the lower levels of social regulation inherent within their ways of organising. Isolates, however, are more likely to defer to the risk management protocols favoured by the Hierarchist thought-style, though potentially with some reluctance. Additionally, it was noted above that key regulatory departments of Risk, Legal and HR display a stronger Hierarchical bias than other departments in the organisation. This is important as they possess significant authority and influence over policy-making, decision-making and in holding stakeholders to account. That these professions tend towards a stronger Hierarchical bias may mean that Hierarchists are more able than other risk cultures to influence and entrench ERM approaches to risk management within the organisation.

The results show that Hierarchists and Individualists have an area of common interest. Hierarchists and the Individualists returned almost identical scores for the ranking of Pricing & Profitability risk when selecting their top 5 risks – 53.7% and 52.8% respectively – and this is higher than for the other two thought-styles. This suggests that Hierarchism and Individualism are more aligned on commercial matters than the other two thought-styles might predict. NDIT would predict that this shared concern for commerciality stems from different motivations of each thought-style. Hierarchists have a concern for commerciality because they wish to be able to balance risk mitigation with reward and because they

recognise the importance of profit for the long-term survival of the organisation and being able to deliver benefits to stakeholders. Individualism may be motivated towards commercial matters due to their greater regard for individual accumulation and their preference for prioritising profit over cautious control.

To summarise, Hierarchism is evidently the dominant risk culture in the UK Insurer and how Hierarchism presents in the organisation largely accords with typical depictions of Hierarchism in Douglasian literature. It is a risk culture that favours structure, process, role delineation and coordination, and, by extension, embraces formal Enterprise Risk Management (ERM) concepts as evidenced in the use of ERM terminology. Hierarchists appear somewhat aware of the pitfalls associated with their preferred approach to risk management – in particular a tendency towards bureaucracy. However, they appear to be willing to make sacrifices in favour of long-term stability, as NDIT would expect. The Hierarchists' have a shared concern with Individualists on commercial risks, albeit for different reasons which also accords with NDIT although this does suggest that some consensus on the matter of commerciality could be achieved between the two risk cultures.

5.3.3 The Isolates

Approximately 1 in 6 respondents (17%) returned results in part 1 of the survey that classify them as Isolates. The Isolate thought-style is more prevalent amongst junior staff (grade B) and is much lower at senior levels (grade F), showing that junior staff experience the Grid dynamic to a greater extent and the Group dynamic to a lesser extent (table 4.22). This result for more junior staff appears to correspond with the NDIT depiction of Isolates having limited scope for acting independently because of the strong social regulation.

Isolates are found in all business areas where greater than 11 responses were received, though higher numbers are present in the General Insurance business (motor, home and travel insurance) and Underwriting, Digital and Data Science teams, Legal and Audit (table 4.24). There is also a higher number than average in key locations including the corporate head office in London (1 in 4 respondents from this location). It is noteworthy that Isolates are found at mid-senior management level (up to grade F) and at head office. This means that decisions fundamental to the direction of the UK Insurer are being made by business leaders who are weakly socially integrated but feel highly bound by social rules and regulation. The higher number of Isolates working in Internal Audit is also noteworthy; of 4 respondents, 3 are classified as Isolates, and 1 as Individualist. This is noteworthy as it contrasts with the scores from

similar control-related functions such as Risk and Finance which are biased towards Hierarchism (which is high-Grid and high-Group), as explained in section 5.3.1. Whilst these results originate from a small sample, it suggests that Internal Audit teams may be less socially integrated. As with the Hierarchist biases discussed in section 5.3.1, this result could be influenced by the type of role Auditors perform. Audit teams are, by nature, independent observers of the organisation, and deliver self-contained projects that are less dependent on social interaction with the rest of the organisation. The results and sentiment may therefore reflect a sense of detachment from the wider organisation and from other team members, leading to lower scores to the Group questions.

5.3.4 The Isolate approach to risk management

Those respondents classified as Isolate using the group and grid question in part 1 of the survey were the least likely of all four thought-styles to select the Isolate risk statement in part 2 of the survey with only 3% doing so and this was unexpected. The Isolate risk statement (*in Appendix 6*) asserts that risk is not predictable, may be down to luck and that risk decisions should be made by those in authority. This result is therefore contrary to typical depictions of Isolate attitudes in NDIT literature to date. It is unclear which part of the Isolate risk statement did not resonate with the Isolate population, but it suggests that their perspectives towards risk management may be more complex than previously conceived of in NDIT. It is also possible that the Isolates experience some psycho-social bias when selecting the risk statements. For example, almost half (44%) selected the Hierarchist statement, suggesting there might be a propensity for Isolates to align to approaches favoured by the dominant thought-style. Due to their experience of high social regulation (Grid), Isolates may feel beholden to respond in line with what they think the organisation, or the researcher expects of them, which might explain the high preference for the Hierarchist statement. Additionally, 28% of Isolates also selected the Individualist statement, which references an individually empowering approach to risk management that is commensurate with the pursuit of opportunity. This suggests that some Isolates might be reacting to their relative powerlessness and indicating that they would prefer to be more empowered as individuals in approaches to managing risk, in response to the low social integration (Group) and high levels of social regulation (Grid) that they experience. The tendency of Isolates to select either the Hierarchist or Individualist statement reflects that the Isolate proposed approach to managing risk is not necessarily wholly distinct; instead, they may be open to influence from the other thought-styles or may seek an approach that is more individually empowering.

The Isolate attitude to risk management is more clearly expressed in the qualitative comments in part 3 of the survey. The comments reflect how Isolates feel they are only weakly integrated with the organisation, are not empowered to make decisions, and therefore feel less able to influence how risk is managed. This is consistent with the NDIT assumption that Isolates are used to feeling constrained and have to follow rules and boundaries enforced by others. A level of detachment from the organisation is further indicated by the language and phrases used by Isolates. Isolate responses most frequently use the company name in feedback (Table 4.31) as if they are separate, or apart from, the organisation. For example, rather than describing risk management practices in an active voice (i.e. 'we do this…') they state what the UK Insurer does (and use the Insurer's name). This is unique to the Isolate group and does not feature in comments from other thought-styles. This further indicates that the Isolates feel a lack of connection to the organisation and a lack of control in respect of how the company approaches risk management.

Whilst NDIT would expect Isolates to comply with social regulation, feedback shows that Isolates are often critical of the high-Grid environment they operate within, and the need to observe prescribed tasks and protocols.

"I spend more time changing process flows for Risk, than I do Process Improvement"

"We focus on achieving audit trails rather than actually consider risk…We are effectively strangling ourselves but are seemingly unaware of it."

It is understandable that Isolates express frustration as they experience strong control over social regulation and this results in their being focused on constraints and limitations. In addition to expressing a level of frustration towards prescribed tasks and protocols, Isolates also provided feedback on the organisational behaviour supporting risk management. Isolates appear concerned that the organisational environment suppresses problems and can drive the wrong behaviour in the pursuit of risk management protocols. This may be associated with Isolates often feeling their voices will not be heard when problems are raised. The following examples articulate this:

"We don't really have an environment that encourages identifying problems and taking action; we tend to hide problems; risk and control targets also seem to drive wrong behaviour."

"This approach merely stops everyone from doing the right thing at the right time as someone somewhere is watching whose sole role is to ensure that a spreadsheet looks green."

Furthermore, some Isolates indicated that risk management is associated with 'blame' and negative interactions between groups of people, as indicated in the comments below.

"It is often still seen as a bureaucracy or blame game rather than seeing the benefits of having it integrated- our culture needs to improve."

"[UK Insurer] *has a somewhat confrontational and very hierarchical culture which can hinder open collaboration and team work."*

These comments reveal that Isolates, if given a voice, may possess specific insights that could enhance the UK Insurer's understanding of how risk is being managed in practice in the organisation. Isolate feedback suggests that risk management protocols and the organisational culture do not always support clear and transparent outcomes in the UK Insurer. If the Isolates are correct, in that risk management is associated with blame and the culture allows problems to be hidden, then the implication is that issues are not always identified or reported, and failure is not always acknowledged or addressed promptly is serious. These findings are important for the UK Insurer to consider.

Additionally, Isolates possess an accompanying level of scepticism towards those in charge of setting policies and making risk decisions. Isolate comments were most likely to be critical of the Risk and Compliance teams, the majority of whom reflect a Hierarchist thought-style.

"Our Risk, Compliance and Legal teams are all far too restrictive."

"The actual risk team have too much say in the final decision and don't always listen to the subject experts."

To summarise, the Isolate attitude towards risk management is more complex than previously thought under NDIT. The responses of Isolates appear to be somewhat influenced by the dominant culture of Hierarchism and there is no evidence that Isolates view risk as 'uncontrollable' and subject to fate as NDIT would attest. Due to Isolates feeling they are not included in the organisation (due to lower levels of social integration) they are not able to exert influence to engender change, and it seems likely that many Isolates simply align to the expectations of dominant thought-styles. The comments and use of language convey a sense of detachment, passivity and scepticism that could be considered distinct

features of Isolate risk culture, and accord with what NDIT would expect. Additionally, the Isolates convey a sense that they observe shortfalls in the UK Insurer's approach to risk management that other three thought-styles do not, such as issues associated with bureaucracy, blame, and problems being hidden. At the same time, the Isolates may be indicating that where a problem exists, there feel there is little possibility of it being dealt with appropriately, because they will not be listened to.

5.3.5 The Individualists

Just 36 survey respondents (7%) returned low scores to both the Group and Grid questions and can be classified as Individualist. Of these respondents, only 7 provided qualitative comments in part 3 of the survey, which makes it more difficult to evaluate their perspective and attitudes towards risk management. Nevertheless, the data indicates that Individualists are most likely to be junior management (grade C and D) or at Director level (table 4.22). There is no notable variance by location. It may be that Directors are more likely to be Individualist as their roles necessitate a focus on ensuring profitability and securing commercial outcomes, and some junior managers may be Individualist as they are more committed to their own agendas than those of the company. Individualists were identified in approximately half of all business areas, and commonly work in the General Insurance business (Claims, Underwriting, Corporate Speciality Risk), Executive support teams, Digital innovation and IT teams (table 4.24). The Individualists are spread across diverse range of teams, which makes it difficult to assess whether role expectations influence the level of social integration and social regulation reported by respondents. NDIT asserts that Individualists should be present in every organisational environment and, therefore, it is not surprising that they are present in business area samples of 15 and above (table 4.24). It is also possible that Individualists are somewhat underrepresented by this research, as according to NDIT, Individualists may have a lower propensity to engage in voluntary risk culture research because they may see it as time-consuming in that it detracts from using time more 'profitably' or not see the benefit to themselves in participating in research. Therefore, the actual percentage of Individualists in the UK Insurer could be greater than 7%.

5.3.6 The Individualist approach to risk management

The following section reviews the Individualist response to the risk statements and qualitative comments to understand the nature of Individualism as a risk culture in the UK Insurer.

As per the other three thought-styles, Individualists are most likely to have favoured the Hierarchist risk statement (42%), despite according to NDIT, it being at odds with their way of working. This possibly

suggests either a degree of psycho-social bias during the research, or, that like Isolates, this group is can be willing to support the dominant Hierarchist ordering if they believe it will somehow lead to personal benefit. 22% of Individualists selected the Individualist risk statement, and Individualists were most likely of the four thought-styles to select the Isolate risk statement (14%), perhaps indicating that some have doubts about the predictability and manageability of risk as NDIT would attest they do.

Whilst Individualists are typically considered to be motivated towards individual autonomy and commercial gain, they were least likely to rank risks relating to competitor disruption and missed market opportunities of high importance. This may indicate that they believe these risks are adequately managed, or that they will be less disruptive to their way of working than other risks such as Cyber and IT Service issues, which were ranked as more important by them (table 4.21). As highlighted in section 5.3.4 Individualists, like Hierarchists, also display a particular interested in Pricing & Profitability risk, revealing that these thought-styles have a mutual interest in commercial success albeit for different reasons, which accords with NDIT.

The qualitative comments provide additional insight into the nature of the Individualist risk culture. According to NDIT, Individualists typically favour individual autonomy and empowerment, rather than prescriptive rules and processes associated with high social regulation (Grid) and high social integration (Group). Additionally, Individualists are concerned to ensure profitability is not hindered. As NDIT would predict, the Individualist qualitative feedback highlights concern around wastefulness and complexity (Table 4.31), both of which can have adverse impacts on commercial outcomes. Similar to the Isolate thought-style, some Individualist comments suggests that risk management protocols have the potential to mask 'what is really going on' or fail to consider the specificities of a situation in managing risk. This concern regarding bureaucracy and prescribed approaches to risk management is evident in these comments:

"There's more concern about filling out forms than truly understanding, and addressing, the situation."

"a one size fits all doesn't work for risk management, risks should be documented and present[ed] to the SLT / appropriate level where decisions are made"

The comments suggest that the Individualist risk culture at the UK Insurer places more importance on individual empowerment to address risks over prescribed approaches and taking an approach that addresses the specificity of the situation rather than generic frameworks, which is in line with what NDIT

would expect in respect of the Individualist thought style. The focus on protecting the autonomy and interests of the individual is also apparent in the number of Individualists who ranked risks relating to ineffective management of talent. For example, the comment below highlights a concern for people, talent and individual wellbeing:

"The question involving managing the risk around talent and people is interesting, I don't feel that this is often seen as a risk when we make key people redundant or rely on people to do more with less, leading to risks around increase in stress, sickness and demotivation. I feel this is actually quite a high risk at this point in time."

Whilst the Individualist emphasis on individual empowerment and autonomy accords with NDIT, the concern for people and wellbeing seems at odds with traditional portrayals of Individualists as independent operators. It is unclear however whether the Individualist risk culture is genuinely concerned for others or focused predominantly on protecting themselves as individuals.

Although qualitative feedback from individualists is limited, the Individualist risk culture is depicted as one that prioritises empowerment and autonomy over prescribed approaches, and for risk management to take account of the specificities of a situation. The comments provide a sense that the 'real picture' can be hidden, that allowing the judgement of individuals in identifying and solving problems would be more effective, and that tactical action is more effective than long-term risk management strategy. The comments reveal dissatisfaction with the dominant risk culture (Hierarchism) which accords with how NDIT would predict Individualists respond to Hierarchical ordering. Namely, Individualists are likely to be less committed to formal protocols and a risk-taking approach which promotes thorough assessment of risks as favoured by Hierarchists and Enclavists. Despite their interest in commercial success and individual autonomy, there is no evidence from this study that Individualists are less cautious in their response to risk or more likely to take excessive amounts of risk versus other thought-styles; the results in this study suggest it is their approach to managing risk that differs compared to other thought-styles such as Hierarchism.

5.3.7 The Enclavists

1 in 5 (21%) of survey respondents returned higher scores to the Group questions and lower scores to the Grid questions and can therefore be classified as Enclavists. Enclavists are somewhat more likely to be mid-senior level managers (grades E and F), and equally split across gender (tables 4.22 and 4.23). The Enclavist culture is more pronounced in the UK Insurer's Product & Proposition departments and also

across Group IT, Digital, People and COO (customer service) teams. It is difficult to evaluate precisely why there could be a relationship between these departments and the presence of Enclavism, as there is considerable breadth of responsibilities across these areas. Enclavists are distinguishable from the other three thought styles by the strong group boundary and it may be that these departments have ways of working that strongly promote a collaborative form of working but this cannot be confirmed. NDIT asserts that Enclavism, like the other four thought-styles, will be present in each organisation, and the results reflect widespread presence across the UK Insurer, with department responses of 11 or more including Enclavism.

5.3.8 The Enclavist approach to risk management

This section reviews the Enclavist response to the risk statements and qualitative comments to evaluate the nature of Enclavism as a risk culture in the UK Insurer.

The Enclavist respondents were the least likely of all thought-styles to select the Hierarchist risk statement, and the most likely to select the Individualist statement (30%). This suggests, as NDIT would predict, that Enclavists resist enforced formal approaches to risk management in favour of individual and group empowerment. Enclavists displayed a lower interest in commercial risks (for example, Missed Market Opportunities and Pricing & Profitability), again as NDIT might predict (table 4.21). However, they ranked Cyber risk and Regulatory & Legal Change of greater importance than the other thought-styles. The reason for this is unclear, but could signal a greater awareness of external stakeholder perspectives or it might indicate that they believe these risks are most likely to disrupt their way of working.

The qualitative comments further reveal the Enclavist scepticism towards social regulation in the form of risk management protocols, as NDIT would predict. The sentiment analysis in table 4.31 shows that Enclavist respondents frequently refer to 'layers' and 'rules', oversight from Group Risk (2nd line risk function), and draconian senior leadership behaviours. The comments reflect a rejection of decision-making that is 'top-down' and not consensus based. This corresponds with how NDIT views Enclavists; namely, Enclavists prefer to operate in an egalitarian manner and reject usual ideas of leadership instead preferring to act collectively. Enclavists are typically viewed as having a focus on integrity, fairness and transparency, and will therefore expect matters relating to risk management to be open to scrutiny. These sentiments are highlighted in the comments below:

"Too many individuals without clearly defined roles causing complex approval layers and often onerous paperwork which doesn't necessarily flush out the right conversation."

"Engagement and sign-off process is really laborious and inefficient."

NDIT also holds that Enclaves follow a precautionary principle as they view the world as fragile (Fig. 2.3) and indeed some comments reveal a concern for vulnerability in the customer base and as a result of organisational change. For example, Enclavist respondents are most likely to mention 'customer' in their qualitative comments, potentially reflecting the expected Enclavist commitment to others but also reflecting the need to protect the customer. An example of this is:

"We are very risk averse because of the highly regulated environment we work in - which is what our customers expect from us."

The Enclavist concern of fragility is also indicated in their references to the impact of change to the organisation. Enclaves are the only thought-style to repeatedly reference the impact of change deliveries (via the delivery of strategic Programmes and Projects) on the organisation, for example:

"If you change something do you understand what has changed and did you consider this before making the change."

Therefore, as a risk culture, Enclavism seems concerned with protecting the organisation from the potential harms of change, as NDIT would predict. However, this should be achieved without overarching and prescriptive management protocols, and excessive top-down supervision by Risk & Compliance functions (such as those that accompany Hierarchism). Thus, the Enclavist risk culture may prefer to devise their own methods for identifying and managing risk through consensus, and within the boundaries of their thought-style and not unduly influenced by outside motives. In an attempt to reduce the fragility of the organisation, Enclavists might seek to mitigate harm by building greater organisational resilience so it can respond to change without detriment. This possibility is supported by the following comment:

"Also need to think about how to set the organisation and teams to be less fragile and more adaptive so that it can react and grow and become more antifragile."

To summarise, the apparent concern for the fragility of the organisation and its customers distinguishes the Enclavists from the other three thought-styles. Enclavists seem to prefer a cautious approach to risk-taking, as NDIT would predict, but are often critical of groups that they perceive place demands on them, including the risk function and senior leadership. For this reason, Enclavists may reject the rationality of the dominant culture (Hierarchism) and their approaches to managing risk.

To conclude overall, it is clear from the results and analysis in this section that all four NDIT thought-styles are present in the UK Insurer, with Hierarchism the most dominant. Each of the four thought-styles possess differing attitudes towards risk management in the UK Insurer. This is revealed by the qualitative comments, and to a lesser extent, the selected risk statements and ranked risks. The next section will consider the implications of four distinct risk cultures on the UK Insurer.

5.4 The Significance of the Results for the UK Insurer

This section evaluates the significance of the results, and the four risk cultures described in section 5.3, for the UK Insurer. This includes an evaluation of the implications for the UK Insurer of a dominant Hierarchist bias alongside a wide variance of thought-styles across each function. The analysis then considers the impact of the four distinct risk cultures on the usage and embedment of an Enterprise Risk Management (ERM) framework in the UK Insurer, arguing that ERM frameworks can be conceived as a classificatory system underpinned by ritual which is Hierarchist in nature. The section also considers implications of the results on identification and reporting of risk, risk communication and decision-making in the UK Insurer.

5.4.1: Implications for the UK Insurer of the dominant and sub-dominant risk cultures

As the principal purpose of NDIT is to be an explanatory tool for cultural comparison, Douglasian scholars generally do not claim any thought-style is more desirable than the others. However, it can be argued that the dominant Hierarchist culture has advantages for the UK Insurer and, additionally, that it is perhaps not surprising this thought style is dominant given the type of organisation and nature of the industry it operates in. This section incorporates discussions of these possible advantages.

The analysis of Hierarchism in the UK Insurer in section 5.3.2 confirms that this risk culture is one that favours prescriptive rules, protocols, processes and delineated accountability, and takes a longer-term view of risk-taking. Further, this risk culture prefers to make thorough assessments of risk and carefully balance this against reward. The prevalence of Hierarchism may be somewhat driven by external

pressures and expectations of the Regulator and end customer. As discussed in chapter 1, the Bank of England and Financial Stability Board (FSB) has made considerable investment into stringent Regulation across the entire FS sector since the 2008 financial crisis, including the ability to identify and moderate Systemically Important Financial Institutions (SIFI's) (Bank of England, 2018). The UK Insurer featured in this study is a Systemically Important Insurer (SII) and subject to continuous oversight and supervision from the Bank of England. In this sense, the UK Insurer is a very different type of organisation to, for example, a charity, a restaurant or retail chain, or a boutique investment firm. Much of the FS sector is, as the 2008 government bailouts reflect, 'too big to fail'. To ensure stability of the firm, provide a secure service and transparency to multiple stakeholder groups, a highly structured, formalised , and long-term perspective to managing risk in the UK Insurer is arguably needed and this matches the preferred approach of Hierarchists.

The strong presence of Hierarchism in the organisation also suggests that the considerable efforts made by the UK Regulator and FS Boards to moderate excessive and short-term risk-taking in the financial services industry post-financial crisis have been successful. It is less likely that Individualism would now present as a dominant culture than 15 years ago prior to the financial crisis notwithstanding that it is possible the results of this study will not have remained static since the end of 2019.

However, NDIT asserts that the three subdominant risk cultures also inherently benefit the UK Insurer, providing stability as part of a functionalist model, and that all four necessarily exist within any institution. The presence of the other three risk cultures and their associated thought styles can help to ensure an unfettered Hierarchist risk culture does not emerge. Fig 2.3 highlights potential negative attributes of Hierarchism especially when it is particularly dominant and entrenched. For example, if hierarchism is not restrained, this can lead to excessive bureaucracy, significant inflexibility, and prescriptiveness. These can all then lead to the type of 'brittle inertia' (the hindrance of progress and innovation due to cumbersome rules and regulations) that Verweij et al. (2006) describe in response to global governance over climate change. Therefore, if unencumbered, the Hierarchist risk culture could produce a state of inertia or eventually become a source of instability for the firm. In addition, each of the other three risk cultures can be considered to have a positive influence on the UK Insurer in their own right. For example, the Enclavists can remind the firm of the need to be prudent, the Isolates can ensure tasks are delivered according to instruction, and the Individualists can encourage change and innovation within the firm.

Discussion of risk culture by the FS industry and regulators is concerned with creating a monolithic desirable risk culture, but the results of this research indicate this is not achievable. Namely, the existence of four risk cultures means that the creation of a single, monolithic risk culture is not possible. Further, the presence of all four risk cultures will impact the way the UK Insurer identifies, captures, manages and communicates about risk, and is a significant departure to how the FS regulator and industry bodies conceive of risk culture, as explained in chapter 1. Furthermore, NDIT also maintains that whilst cultural variation is of benefit to an organisation, the different thought-styles are also a source of difference and conflict across the population of an organisation – as part of a cultural dialogue. Therefore, a discussion of the implications of the results on organisational practices – Enterprise Risk Management (ERM) Framework & Policy setting, Risk Communication and Risk Decision-making will now follow. Whilst the discussion is based on the survey results from the UK Insurer, the conclusions may be applicable to similar FS organisations and the wider FS industry.

5.4.2: Implications of four risk cultures on ERM Framework & Policy setting

This section evaluates the implication of four risk cultures on the risk framework and policy setting in the UK Insurer. One aspect of the argument is that the Enterprise Risk Management (ERM) frameworks and policies adopted in the organisation, and which are commonly adopted in the wider FS industry, are inherently Hierarchist in nature. This section additionally considers ERM frameworks when analysed using the Douglasian concepts of classification and ritual. The argument presented is that the Douglasian concepts of classification and ritual are central to understanding the operation of ERM frameworks and how they are, therefore, accepted or rejected by each thought-style.

Enterprise Risk Management (ERM) frameworks are adopted by FS firms as there is a prevalent belief they are able to accurately assess and manage the risk exposures of the organisation and act as the single legitimate source of information that can be aggregated and understood by Boards and Executives. Some firms adopt global standards for ERM such as ISO:31000 but regardless of which ERM framework is deployed, it will involve the adoption of formal processes, procedures, data collection methods, reporting cycles, governance and oversight arrangements (for example, establishing appropriate Committees) to provide Boards and Executives with the requisite information for decision-making in a risk context. The ERM practices will all be documented in detail in a risk management policy. Policy setting will cover specific types of risks such as risks relating to conduct, sales, financial lending, and will set out the organisation's approach and attitude to risk-taking.

From a Douglasian perspective, it can be argued that ERM frameworks appear to be essentially Hierarchist. Fundamentally, ERM frameworks drive top-down decision-making according to role and seniority, require individuals to assume specific roles and responsibilities, and prescribe consistency of process, all of which corresponds with high social regulation (Grid). They also rely on transparency, mutual sharing of information, and cross-functional collaboration, which correspond to high social integration (Group). The information generated by the ERM framework carries legitimacy in a Hierarchical setting and is relied upon by senior managers, Auditors, Boards and the Regulator as a 'single source of truth'. Additionally, in accordance with Hierarchism, action is expected to be taken in response to people not adhering to the ERM framework or not acting on the data that it produces. In these respects, ERM frameworks can be considered Hierarchist because they seek to control and regulate behaviour, whilst relying on shared objectives and mutual collaboration to achieve its goals.

If ERM frameworks are predominantly attractive to the Hierarchist thought-style then it can be expected that employees from non-Hierarchist thought-styles may reject it, albeit for different reasons. Qualitative feedback from the UK Insurer shows that some elements of the ERM framework and how it is applied are rejected by non-Hierarchist cultures. The sentiment analysis in table 4.31 shows that Enclavist, Isolate and Individualist respondents are critical of various aspects of ERM, and is illustrated further with reference to some example qualitative comments.

"There's more concern about filling out forms than truly understanding, and addressing, the situation" (Individualist feedback)

"[company name] risk framework is extremely complex and the system difficult to navigate." (Isolate feedback)

"risk is seen as too much of a separate function rather than being part of everyone's role" (Enclavist feedback)

These examples show Individualist respondents as being critical of having to spend time on routine documentation, which is a facet of any ERM system, rather than being empowered to address risks as they arise, whereas Isolates comment on the difficulty in understanding how to engage with the ERM framework. Enclavists are sceptical of ERM-rooted risk management methods where risk responsibilities lie with designated individuals rather than risk responsibilities being spread in a more egalitarian manner and being a part of everyone's roles. These types of responses are consistent with how NDIT would

expect each of the three non-dominant solidarities risk culture to respond to a way of working that is Hierarchist.

If, as this feedback suggests, the non-Hierarchist risk cultures are inclined to reject the ERM framework, and engage with it less consistently, there may be implications for the UK Insurer. It can be assumed that the responses of non-Hierarchist risk cultures to ERM will affect the levels to which ERM is followed and embedded across the organisation. Furthermore, if non-Hierarchist cultures do not fully participate in the ERM framework because of its Hierarchist nature, this could mean that risks are not always identified or mitigated by the organisation, because those observing risks reject formal methods of managing them (or in the case of Isolates, are reticent to do so). However, there is also a possibility that risks are identified and mitigated outside of the ERM framework (for example, by Individualists feeling empowered to decide on the best course of action). Feedback from the Isolate and the Individualist risk cultures suggest that ERM processes have the potential to 'mask what is really going on' (as explained in sections 5.3) which further suggests that some risks are handled in a way that is not reflected in the formal ERM framework.

Whilst it is argued that each non-dominant risk culture may respond differently to ERM frameworks, it may be that each is willing to engage with aspects of the ERM framework where, and if, it serves the ultimate attainment of some of their goals. Ingram et al. (2014) postulate that employees can appear to engage with ERM even though it conflicts with underlying beliefs, thus rendering ERM ineffective – a situation they term 'Potemkin's ERM' (Ingram, Underwood and Thompson, 2014, pg.11). The existence of 'Potemkin's ERM' – where individuals fulfil the minimum requirements associated with an ERM framework, albeit without psychological commitment – appears plausible in areas of the UK Insurer that possess a high proportion of non-Hierarchist teams. Therefore, the non-Hierarchist cultures in the UK Insurer may be content with fulfilling basic requirements of the dominant culture's risk management strategy (ERM) in exchange participating in the social interaction of the organisation, or, achieve specific goals. For example, an Individualist could decide to use formal ERM risk data to obtain backing for a project that fits their agenda, an Enclavist could use the ERM framework to ensure a risk that is of particular concern to them is addressed, and Isolates may be resigned to following ERM framework protocols.

Commented [PL2]: Achieving?

The above discussion implies it is worth considering whether the UK Insurer and other FS firms could, or should, address divergent cultural responses towards ERM frameworks. Douglasian theory is clear however, that attempts to impose ways of working (i.e., process, protocols, consequences of non-

adherence) which are developed by one of the four cultures will not garner full adherence across the other cultures - dissent will occur and in NDIT it is argued this dissent is necessary to maintain equilibrium between the four cultures and to prevent one thought-style from destabilising the organisation by becoming a parody of itself. The UK Insurer could seek to incorporate divergent views into the ERM framework in a way that is akin to the concept of 'Clumsy Solutions' described in Chapter 2 – as a way of practically resolving thought-style differences and building sustainable solutions that are partly acceptable to each thought-style. Whether it is possible to amend ERM frameworks to facilitate maximum adoption across all four NDIT thought-styles using a Clumsy Solutions-type approach would require further research.

5.4.2.1 The role of Douglasian classification and ritual in ERM frameworks

The results of this study also present an opportunity to explore and understand ERM frameworks through the Douglasian concepts of classification and ritual. It is argued below that ERM frameworks comprise a classificatory system consistent with Hierarchism that is underpinned by ritual activity which is similarly Hierarchically-oriented and, therefore, these Douglasian concepts are central to understanding the operation of ERM-based risk management protocols. Additionally, it is argued that the reaction of thought-styles to classificatory systems and rituals as part of ERM practice further delineate each of the four thought-styles as they adopt or reject ERM frameworks. Finally, it is argued that the qualitative data from the UK Insurer reveals that each thought-style has its own way of engaging with, adopting, and subverting classificatory systems and rituals which accord with NDIT.

It is first worth revisiting definitions of classification and ritual as set out in Douglasian literature before discussing these concepts in the context of ERM. Classification, underpinned by ritual activity, is articulated as a causal mechanism related to social organisation which evidences specific types of social ordering, and is used to perpetuate the different forms of social ordering. Classification serves multiple purposes for social ordering. For example, classification might be used to label items to manage danger or disease, to manage social behaviour in institutions, or to develop coherence and purposefulness, and it can also be a cause of conflict (6, 2017). Ritual comprises the social acts that generate and maintain systems of classification, and according to Douglas ritual performances are used to sustain conformity (for example, marriage ceremonies) in respect of each of the forms of social ordering. Hence, Douglas also argues that ritual is a method of control and communication within a group setting; namely, it comprises a restricted code between members, driven by a need for efficiency and to establish and maintain social boundaries (Douglas 2002).

As highlighted in the previous section, Enterprise Risk Management (ERM) frameworks operate via top-down decision-making according to role and seniority, and require individuals to assume specific roles and responsibilities. This is in accordance with high social regulation (Grid) and high social integration (Group) and can, therefore, be considered Hierarchist in nature. ERM relies on clear demarcation of risk concepts, risk data types, risk language and terminology. Ritualistic actions performed in the management of risk when ERM frameworks are adopted are also Hierarchical and include, for example, convening meetings which comprise individuals holding particular roles, implementing and embedding formal approval protocols which need to be followed, regularised (monthly) reporting cycles, and periodic gathering of risk data and insight in a highly structured manner. Conceived of in this way, ERM frameworks can be considered a classificatory system as they ensure there is a coherent and purposeful approach to risk management and they direct how individuals in particular roles should go about managing risk. Therefore, ERM frameworks assist an organisation in stratifying, capturing and managing risk information which is then consumed and acted on via ritualistic activity in a Hierarchical manner.

The survey results from the UK Insurer (sentiment analysis and word count in tables 4.31 and 4.32 in chapter 4) provide insight as to how each risk culture navigates the classificatory framework and rituals associated with ERM. The responses are typical of how NDIT asserts each thought-style will respond to what has been argued is a Hierarchically-biased classificatory system. Hierarchist respondents to the survey provide qualitative comments in favour of greater stringency and consistency of application of the ERM framework, and use terminology consistent with an ERM framework (for example, referring to ERM terminology relating to controls, process, governance). They are also concerned 'box-ticking' is occurring and that there is superficial engagement by some colleagues rather than a full commitment to the ERM framework and processes. This appeal for the ERM framework to be applied consistently across the organisation and for there to be full commitment to operationalising the ERM framework can be understood as a request that all colleagues conform to ERM as the framework most appropriately classifies how risk management activities should be co-ordinated across the organisation. Further, the Hierarchist respondents want all colleagues to fully participate in the rituals associated with an ERM approach to managing risk and not to participate superficially.

The non-dominant risk cultures (Enclavism, Isolates, Individualism) respond differently to the Hierarchical classificatory systems and ritual activities underpinning the ERM framework. Whilst also in favour of a relatively cautious approach to risk, Enclavists are critical of the excessive documentation and process, sceptical of supervisory activity from the Risk and Compliance teams, and of the requirement for multiple 'sign-offs or approvals which arise from this Hierarchical classification. Despite such

misgivings, Enclavists are likely to take comfort in the classificatory boundaries offered by ERM as a way of protecting the organisation from harm, and will expect the ritual aspects to be observed fairly and transparently. The Isolates express frustrations about process and complexity, but appear ultimately resigned to doing what is required of them, and are therefore passively accepting of the classificatory system. The Individualists find Hierarchical classificatory systems and ritualistic activity associated with ERM contrary to their desire for individual autonomy and empowerment and may believe they have an adverse effect on commercial outcomes. Therefore, the different cultural responses to the ERM framework is driven by distinct responses to classificatory systems and ritual activity that is inherent in the way ERM operates.

Developing this further, Douglasian theorists maintain that each of the four risk cultures in the UK Insurer will respond to anomalies in the ERM classificatory system differently – for example, accept, reject or ignore them. Classificatory anomalies can be conceived of as 'unexpected outcomes' or 'surprises' (6, 2011, pg. 92). 6, (2001) describes how the four thought-styles are thought to deal with anomalies (6, 2011). Anomalies within an ERM framework could include individuals taking action outside established protocols, taking action that does not generate a positive result, or the inability of the ERM to account for unforeseen and uncontrolled events.

The qualitative responses provide examples of how each risk culture deals with such anomalies – and these responses are as NDIT theory and 6 predict. Enclavists expect the classificatory systems and supporting rituals to be observed fairly and transparently. Consequently, an Enclavist comment displays a sense of betrayal that senior leaders can '*shout the loudest',* and override others' opinions and established boundaries. Additionally, Isolates seem open to passively accepting anomalies and engaging in tactical coping behaviour, which again is what the existing theory would predict. An example of this in the comments is a respondent in the Isolate category demonstrating such acceptance in saying they are conducting process improvement work despite knowing that it will not lead to a better outcome. There is no evidence in the qualitative feedback that anomalies are being concealed or exploited for further gain by Individualists as 6 (2011) asserts, but that does not mean that such responses do not occur in the UK Insurer. By contrast, some Hierarchists appear to be in favour of adjusting the ERM classificatory framework in order that it is better able to anticipate and respond to '*left field events'* and unmitigated risks like IT outages. This reflects the Hierarchist desire to reinforce and expand classificatory frameworks to become all-encompassing and complete.

It is clear thought-styles do not always agree with how others deal with identified anomalies – for example, anomalies may be dealt with via concealment, re-assertion of boundaries, and acceptance or apathy dependent on the thought-style – thereby reinforcing the potential for conflict to arise, as NDIT would predict. For example, Hierarchists would not agree with passive acceptance of anomalies that might be tolerated by Isolates. The insights from this study affirm 6 and Richards' (2017) view that classificatory systems represent a source of conflict within social settings, as groups of people respond differently to anomalies, either celebrating, exploiting or supressing them (6, 2017). Such conflict is evident in the UK Insurer in respect to how different thought-styles navigate the ERM framework.

These findings also suggest that formal classificatory systems within organisations (including ERM frameworks) are not necessarily stable, can be fragile, and are subject to challenge and revision, because NDIT thought-styles have the means to challenge and subvert them. Further, formal and established classificatory systems such as the Hierarchical ERM classificatory system will generate deviations as individuals find ways to manage anomalies in accordance with their thought-style. This means that some individuals might be adhering to the formal established ERM classificatory systems whilst also, in parallel, engaging in identifying ways to informally reject and subvert these classificatory systems, as NDIT would maintain that they will do.

5.4.3: Implications of four risk cultures on risk communication

This section considers the impact of four NDIT risk cultures in the UK Insurer on the way risk is communicated. It builds on the assertion that ERM is a classificatory system underpinned by ritual, explored in section 5.4.1, arguing that classification and ritual influence how risk information is captured and disseminated. It also argues that trust, as underpinned by the Douglasian concept of Group, is a requisite for effective risk communication, and how trust manifests in the UK Insurer is discussed.

Risk communication can be defined as the purposeful exchange of risk information or data between interested parties (Woods, 2010), risk reporting and escalation (Power, Ashby and Palermo, 2013), and the clear communication of risk appetite – i.e. how much risk an organisation is willing to take (McKay, 2017). Successful risk communication is imperative for timely and informed decision-making and coordinated organisational responses to risk. With respect to NDIT, Douglas argues that communication within a social institution relies on classificatory systems and language or 'restricted code'; this is driven by a need for efficiency and to establish and maintain boundaries (Douglas, 2002). Therefore, it can be

argued that classificatory systems (such as the ERM framework, and associated concepts and terminology) provide a foundation for risk communication.

The existence of a formal, Hierarchical, classificatory system (ERM) that mediates risk communication means that non-dominant risk cultures (Enclavist, Isolates, Individualists) may find it challenging to communicate, or be heard (by Hierarchists), on the topic of risk. The survey comments reflect that risk communication in the organisation is principally navigated via ERM as the classificatory system and ritualistic activities adjoined to ERM and as propagated by the dominant culture of Hierarchism. As discussed in section 5.3.2, Isolate survey comments reveal a concern that the dominant Hierarchist culture suppresses their opinions; in addition, Enclavist feedback suggests ERM protocols do not always capture relevant risk information:

"I think Risk management is too process driven and does not take enough note of data or intelligence, risk is seen as too much of a separate function rather than being part of everyone's role." (Enclavist feedback)

"complex approval layers and often onerous paperwork which doesn't necessarily flush out the right conversation." (Enclavist feedback)

Effective risk communication relies also on mutual trust between groups and individuals. Douglas argues that social integration (Group) is crucial to support trust; the alternatives are 'short-term and fragile' trust or total absence of cooperation (Douglas, 1986, pg.1). This means that the absence of the Group dynamic could erode levels of trust. This then leads to a 'selective deafness' where neither of two parties can hear what each other is saying (Douglas, 1986, pg.3). It follows that low levels of trust are more likely to manifest in low-Group thought-styles of Individualism and Isolates. Qualitative feedback from the UK Insurer reveals some evidence of mistrust and suspicion of others from each of the four risk cultures and not just the Individualist and Isolate thought-styles. The following comment is from an Isolate and suggests the culture in the UK Insurer does not always facilitate cooperation and implies some lack of trust:

"[The UK Insurer] has a somewhat confrontational and very hierarchical culture which can hinder open collaboration and team work."

However, Hierarchists and Enclavists comments also reveal a mistrust of other groups and their approaches to managing risk (table 4.32), not just the risk cultures that are 'low Group' (Isolates and Individualists). Enclavist feedback is critical and mistrusting of the Risk and Compliance functions, for example in this statement which shows a mistrust of CISO (the UK Insurer's Chief Information Security Office):

"CISO rules - against all logic" (Enclavist feedback)

Conversely, it also appears that Hierarchists have a tendency to mistrust low-Grid risk cultures for their apparent disregard of established risk management priorities and procedures, and low regard for key risks (for example, IT Security), which can be explained by reference to their thought-styles. This accords with NDIT as Hierarchists are critical of those who do not follow risk management processes and procedures. For example:

"It is concerning to me how many people in the business claim to not have enough time to manage IT Security/Data Security risks."

"Change deliveries try and get round the system and escalate to senior levels until they get a JFDI [just do it] *over-ruling risk concerns."*

Overall, these comments evidence that there is potential for each risk culture in the UK Insurer to mistrust other risk cultures, which has implications for risk communication as it may consequently stifle the exchange of risk information. However, because risk communication is driven and legitimised by the UK Insurer's Hierarchical classificatory framework (ERM) the organisation might assume incorrectly that communication that is mediated by the ERM framework is sufficient to engage all people within the organisation and that risk information communicated in this way will be embraced and understood by all. The qualitative feedback suggests this is not always the case, and it is not the case that all people are engaged. Ultimately, the existence of four risk cultures may inherently hamper the ability of the UK Insurer to communicate effectively about risk, and in a manner that is accepted by each thought-style.

5.4.4 Impact of four risk cultures on risk decision-making in the UK Insurer

This section evaluates the impact of the existence of all four risk cultures on risk decision-making in the UK Insurer. Douglas maintains in *How Institutions Think* (1986) that important decisions are left to the

institution whilst individuals busy themselves with tactics and details, albeit within organisational boundaries (Douglas, 1986). Douglas also asserts that as a result, conflict surrounding key decisions is inevitable. It could be assumed that the dominant Hierarchical risk culture in the UK Insurer leads to ERM-based protocols for risk decision-making dominating, including setting of formal risk appetites. This will be reinforced by risk information gathered via the ERM framework. However, NDIT would expect the other three risk cultures to mediate or reject Hierarchist decision-making protocols, and the decisions made. This is examined below.

The survey results discussed in section 5.3 provide insights into how the four risk cultures navigate risk decision-making, and show that they differ from one another in accordance with NDIT. It is clear from the qualitative feedback that Hierarchists expect risk decisions to be measured, structured and consistent with established protocols and risk appetites. Risks will be taken, but only if adequate time and effort is allocated to evaluating the risk thoroughly; hence, there is a sense that Hierarchists are prepared to accept delays to decision-making to facilitate a sound evaluation and outcome. Hierarchists also recognise a tension between judicious risk decision-making and innovation, and that both caution and commerciality are required for the firm's long-term prosperity. The Enclavists typically expect there to be group consensus over decisions, which is aligned to their high level of social integration (Group), and they would not expect decisions to be made top-down. They are critical of Hierarchist control structures such as complex approval and sign-off processes, and outside interference by Risk and Compliance teams. They are equally critical, however, of senior leaders who subvert agreed decision-making processes (for example, they do not approve of '*whoever shouts the loudest'* being acceptable as an approach for deciding who makes decisions). The Enclavists demonstrate a strong concern about the impact of decisions on the end customer and whether risk decisions will add to the fragility of the organisation. Individualist feedback reflects their wish for individual empowerment and autonomy in decision-makingand as NDIT predicts, prefer a tailored approach to each risk situation. Where they are required to engage with Hierarchist decision-making procedures and sign-off processes, NDIT predicts that Individualists may decide to conform but only if this also facilitates them in pursuing and achieving their own goals. By contrast, the Isolate culture appears to be the least engaged in decision-making. NDIT would predict this as Isolates are highly socially regulated but not heavily socially integrated which leads them to being resigned to accepting whatever might happen. The language used by Isolates reflects this sense of detachment; for example, their responses include discussions of what the firm does, rather than what they do.

It is clear from the qualitative feedback that the four risk cultures in the UK Insurer approach decision-making differently and can be critical of how other the other cultures approach decisions. However, further research into the organisation's decision-making (for example, via case study analysis) is necessary to understand in greater detail how decisions in the UK Insurer are impacted by each of the four risk cultures. This would be a worthy focus for future NDIT research. Linsley & Shrives (2014) propose that the extent to which different thought-styles engage in a debate may depend on the topic of debate; for example, Individualists may be more engaged in debates about a new product launch whilst Hierarchists and Enclavists may be more engaged in debates on cyber resilience strategy. Whilst this is plausible, it cannot be confirmed in respect of the qualitative feedback obtained in this study. It does, however, seem likely that Hierarchist decision-making protocols will have a significant influence in the way decisions are made and justified, given the prevalence and dominance of the Hierarchical thought style at all levels of the organisation. The implications for the UK Insurer are that the other three risk cultures either reject the decision-making processes established by the dominant risk culture or they navigate round them to achieve their own aims.

5.5 Implications of the results for the UK FS Industry and the FS Regulator

This section focuses on the implications of Douglasian theory, and the results from the UK Insurer, on the FS Industry. It is argued that the findings from this study contrast with the Regulator's (Bank of England) conceptualisation of risk culture and those of FS industry bodies. Furthermore, it is argued that the existence of multiple risk cultures, as part of an NDIT functionalist model and demonstrated in this study, should be taken into account by the FS's Regulator in their supervisory approaches because not all risk cultures will respond in a manner that the FS Regulator might expect. It is then argued that the dominant culture of Hierarchism in the UK Insurer, when coupled with the three other risk cultures (as NDIT maintains) can be viewed as advantageous for the FS industry.

As explained in the Introductory chapter, the UK FS Regulator defines risk culture somewhat ambiguously and does not stipulate what the ideal risk culture looks like for any firm (Davidson, 2020). The Regulator tends to monitor culture through 'indicators', 'red flags' and tangible manifestations of culture (for example, reward systems, governance structures, purpose and leadership) rather than by assessment of the organisational dynamics that underpin culture (FCA, 2015). There appears to be an inherent assumption that each FS firm has a single monolithic risk culture, with single corresponding manifestations of reward, governance, purpose and leadership. The results of this study using NDIT challenges these assumptions, evidencing that four risk cultures are present in the UK Insurer, each

possessing different attitudes towards risk management. Douglasian theory maintains that there are four thought-styles present in any organisation, so a minimum of four can be expected to exist across each firm in the FS industry, interacting as part of a functionalist model. Therefore, the results of this study could have practical consequences for the FS Regulators and their supervisory approach.

Firstly, the results of this study mean that the FS Regulators and Boards should accept that a single ideal risk culture will not be present in an organisation and nor can it be manifested through cultural interventions. Therefore, it will not prove feasible for FS firms to manifest a singular 'ideal' risk culture through leadership interventions or through setting an appropriate 'tone from the top'. The results of this study run counter to the claim of FS Regulators who maintain that risk culture can be created through role modelling of behaviours by senior leaders. Furthermore, it can be argued that Regulatory intervention – such as increased supervision or censure, which is often the response of the UK Regulator to policy or conduct infringements - may also not generate the desired outcome. The approach to industry supervision by the FS Regulator appears to align with Hierarchical norms – that is, the approach follows the high Group and high Grid principles of central control, consistency, and measurability – the desired outcome of which is stable, resilient and compliant FS firms. Arguably, this regulatory approach is a response to an Individualist FS industry culture having been to the fore in the years prior to the 2008 financial crisis. However, NDIT would predict that each thought-style will respond differently to the FS Regulator imposing a Hierarchically-oriented form of supervision. Whilst Hierarchists might accept additional intervention from the regulator, Enclavists and Individualists would be expected to react against the imposition of greater levels of social regulation (Grid) from the Regulator (albeit for different reasons), whilst the Isolates may passively support the Regulator whilst not being committed to the intervention. If this is the case then the FS Regulator's supervisory approach should, at least, consider how each of the NDIT thought-styles might react and engage with Regulatory interventions and frameworks.
Whilst the FS Regulator has not opined on the possibility of multiple risk cultures in FS firms, it may well support the idea that diverse perspectives are required to support business activity, as NDIT would also assert. This is because, as argued in an earlier section, NDIT maintains that the presence of all four thought-styles bring benefits to an organisation. A recent discussion paper from the PRA and FCA articulates new regulation that will ensure diversity and inclusion is prioritised across FS firms, and that this will be measured and monitored as part of ongoing supervision (Bank of England, PRA and FCA, 2021). The discussion paper acknowledges the relationship between diversity of thought and risk management, conduct and fairness, emphasising that diverse views must be incorporated into decision-making (Bank of England, PRA and FCA, 2021). The discussion paper also highlights the need for 'culture audits' to be undertaken by Internal Audit in order to evaluate whether diversity and inclusion

initiatives are positively impacting the firm (Bank of England, PRA and FCA, 2021). Therefore, whilst the FS Regulator still focuses on arguing that firms possess a single risk culture, it also acknowledges that diversity is critical for risk management and positive conduct outcomes and may therefore, in principle, be receptive to the concept of multiple risk cultures, and plural rationality, as outlined by NDIT. However, this paper appears to contain an assumption from the FS Regulator that achieving a mix of protected characteristics (gender, race, social class) is sufficient to engender diversity of thought. It is not clear how the FS Regulator might justify this assumption, and it contrasts with Douglasian theory that it is social relations that generate different thought-styles within an organisation, not individuals with different characteristics.

Consideration will now be given to the implications of the dominant Hierarchical culture in the UK Insurer, and the existence of three additional cultures, on the FS industry overall. Whilst other FS firms may not possess the same percentage mix of NDIT cultures as the UK Insurer in this study, the Hierarchist bias in the UK Insurer is perhaps not surprising and could be reflective of it being a dominant culture in the wider industry. Considerable investment into regulation and control across the entire FS sector was made by the Bank of England and Financial Stability Board (FSB) in response to the financial crisis in 2008 (as outlined in chapter 1). This included establishing a framework to identify, oversee and moderate Systemically Important Financial Institutions (SIFI's) including the UK Insurer featured in this study. Therefore, the strong presence of Hierarchism in the UK Insurer suggests that this is a result of efforts to moderate excessive and short-term risk-taking by the UK Regulator and FS Boards.

Despite the potential shortcomings associated with Hierarchism (such as brittleness and fragility, as explained in fig 2.3 and discussed in section 5.4.1 above), it can be argued that a dominant culture of Hierarchism is beneficial in providing stability for FS firms. This is because whilst non-Hierarchist risk cultures will seek to subvert or reject them, structured risk management capabilities (such as that created through embedding a Hierarchically-ordered ERM framework) are necessary to ensure organisations with immense social significance (such as Systemically Important Insurers) are not likely to encounter difficulties or fail. The Hierarchist approach to risk management stresses consistency, transparency, data-informed decisions, sustainable long-term outcomes, and ensure those with authority and experience are held accountable for their actions. Arguably, these approaches assist the FS industry in reducing harm to consumers and the economy. It could be difficult to argue that the FS industry would be more stable or better protect consumers if firms operated with a non-Hierarchist dominant risk culture, i.e. one that is Enclavist, Individualist or Isolate. For example, a dominant culture of Enclavism would not sustain the overarching frameworks, rules and protocols required to manage organisations of great complexity and

scale. A dominant culture of Individualism would have too great a propensity to take risks on the assumption that losses could be recouped in the long-term. A dominant culture of Isolates would result in a fractured and apathetic organisation that is tolerant of disfunction. Therefore it is argued that social regulation or 'Grid' (adherence to process, accountabilities) and social integration or 'Group' (cooperation and collective common aims) seem necessary to reduce the likelihood of uncontrolled risk-taking and the pursuit of short-term or personal gain over long-term stability.

Whilst NDIT asserts that all organisations necessarily contain all four thought-styles, it has not been possible to evidence this is of overall benefit to the UK Insurer or would be to other FS firms. However, it is conceivable that four risk cultures could provide FS firms with greater scope for potential gain and opportunity, whilst reducing corporate risk 'blindspots' and groupthink in respect of risk identification and risk management strategies. The survey results from the UK Insurer provide some insight into how this could manifest. For example, where business opportunities or programmatic change is on the horizon, an Individualist leader may be more successful in seizing a timely outcome by breaking gridlock and working around formal procedures. Alternatively, when running a customer service operation, an Enclavist risk culture might be more effective in ensuring robust management of risk becomes part of everyone's role, thereby reducing reliance on experts, ensuring that individuals are empowered to make decisions in the customer's best interests. Finally, an Isolate risk culture might be more effective in enduring disruption (for example, from IT service issues or Merger & Acquisition activity) as these individuals may be more content to follow set procedures and ensure operations continue, without expecting to have input into key decisions. This could be short-lived however if Isolates decide to abdicate responsibility and leave the company. In these respects, it is possible to envision that a combination of risk cultures could potentially be more effective in the management of risk across FS firms than just one risk culture.

5.6 Implications of the results for existing FS risk culture research

This section considers the outcomes of NDIT research in the UK Insurer in the context of existing FS risk culture research. As outlined in chapter 1, research on risk culture in the FS industry is relatively sparse, with recent contributions from Power et al. (2013), Mikes (2009, 2011), and Tuveson et al. (2020). These prior studies all attempt to describe and understand risk culture but are limited. In summary, Power et al. (2013) are successful in identifying there are multiple issues associated in understanding, articulating, and manging risk culture. Power et al. (2013) study multiple organisations and, in consultation with risk practitioners, CRO's, CEO's and Board members and meet the stated aim of the study which is to

"…provide additional awareness of the complex challenges facing CROs, CEOs and Boards who genuinely wish to influence…cultural conditions" (Power, et al. 2013. pg.12). Mikes' (2009; 2011) work on risk culture in FS firms focuses on the application of risk management methodology, specifically the embedding of ERM across the industry and its competition with other control systems like capital allocation procedures. Mikes uses the idea of calculative cultures to examine two types of ERM embedding but there is no theoretical underpinning to the explain how calculative cultures might result in the two types of ERM system. The most recent publication, Tuveson et al. (2020), is a collection of essays that provide a comprehensive overview of risk culture in business, and provides multidisciplinary perspectives on risk culture across UK businesses from thought leaders and academics. Most significantly, Tuveson et al (2020) debates the relationship between individual agency and concludes that the task of regulating collective activities of many individuals is complex, and could be managed more effectively by balancing official sector regulation and self-regulatory initiatives that build on existing institutional knowledge in the financial sector (Tuveson, Ralph and Alexander, 2020). Overall, this work emphasises the need for an institutional approach to understanding risk culture, explicitly rejecting the notion that individual agents ('bad apples') are responsible for organisational failure.

However, questions remain regarding the fundamental determinants of risk culture which these prior studies have not answered. These include questions about causality, the qualitative and measurable aspects of risk culture, whether a transferable model or theory for analysing and understanding risk culture is possible, and how to account for the presence of different sub-cultures or different perspectives within the organisation. This section now evaluates how these existing pieces of research compare with Douglasian theory and the survey results from the UK Insurer, and to what extent Douglasian theory supplements the existing understanding of risk culture as set out in this prior research. Overall, it is argued that Douglasian theory (NDIT) and the outcomes of this study have several advantages over existing risk culture research in FS firms, with each explained in turn below.

The first advantage of NDIT over other theories of risk culture is that it proposes a clear definition of risk culture; namely, that risk culture can be defined as an outcome of the Douglasian Group and Grid dynamics that create thought-styles, which in turn influences how groups of people perceive and respond to risk. Whilst the precise nature of Group and Grid remain open to further debate, NDIT can account for the determinants of risk culture. By contrast, Power et al. (2013) do not commit to a definition of risk culture, instead providing multiple possible conceptualisations across academic and industry sources. Similarly, whilst many options for managing and transforming risk culture are described, their work stops short of providing a framework or method to achieve this. Nor is risk culture explicitly defined by Mikes

(2009; 2011), with only a vague reference being made to risk culture having some connection to 'senior managerial attitudes towards the use and limitations of highly analytical practices in the organisation' (Mikes, 2009, pg4). Tuveson et al. (2020) similarly do not propose a definition of risk culture. Furthermore, the conclusion acknowledges that 'academic studies have not yet yielded the proof that risk culture exists as an entity' (Tuveson,et al, 2020, pg.271) which further illustrates there is a paucity of academic research into risk culture and a disconnect between academic analyses of risk culture and industry and regulatory conceptions of risk culture.

The second advantage of NDIT is that it provides a framework for identifying, analysing, and measuring organisational culture. The survey method adopted by this study has evidenced the existence of multiple risk cultures in the UK Insurer, whilst the other three existing works do not provide a method for identifying or measuring risk culture. Power et al. (2013) propose multiple possible interpretations for risk culture and identification of characteristics, but navigates away from a single proposal for understanding culture. "We have documented a number of questions arising from our work as a pathway to achieving this awareness. We have not sought however to position our work as another advisory offering." (Power, Ashby and Palermo, 2013. pg.12). Likewise, Mikes' work does not articulate a framework for stratifying risk culture, instead proposing that capital allocation procedures have engendered distinct cultural approaches to Enterprise Risk Management (ERM), specifically one that is 'calculative', driven by shareholder value, and one that is focused on 'holistic control' and negotiation. It is questionable that these proposed quantitative and qualitative approaches to ERM represent risk cultures, and Mikes does not explain what constitutes a 'calculative' risk culture. Whilst some risk professionals have a background in actuarial science and accountancy, which informs professional focus – it is unclear on what basis this is evidence of a separate culture as Mikes asserts.

Finally, as an explanatory framework, NDIT also helps to explain why there are differing perspectives on how risks should be managed, and different attitudes towards ERM frameworks, communication and risk decision-making to exist in the same organisation. Power et al. (2013) and Tuveson et al (2020) do not discuss this important aspect of varying responses to risk management. Mikes' (2009) exploration of calculative versus non-calculative cultures may provide some explanation as to how risk professionals approach risk management according to their professional training, however, this does not account for different attitudes towards risk management beyond the risk function, or the influence of external groups as part of a functionalist model.

To summarise, Douglasian theory (NDIT) and the outcomes of this study have several advantages over existing risk culture research in FS firms – specifically that conducted by Powers et al. (2013), Tuveson et al (2020) and Mikes (2009;2011) – and adds to our understanding of risk culture. NDIT provides a definition of risk culture and accounts for its fundamental determinants (Douglasian Group and Grid dynamics). Its explanatory power extends to understand differing cultural responses to risk management strategies and ERM frameworks. Additionally, the NDIT framework and the survey methodology are transferable to other FS firms and other industries, which means that these differences may be identifiable across a wide number of organisations.

5.7: Conclusion

This chapter assessed the quantitative and qualitative survey data to provide a clear articulation of the four NDIT thought-styles as they manifest in the UK Insurer, demonstrating the existence of multiple risk cultures within an FS firm. The impact of the survey findings on the operation of enterprise risk management (ERM) frameworks, risk communication and risk decision-making was assessed. The outputs of this discussion were then used to evaluate implications for FS firms, the Regulatory approach and existing research on risk culture in FS firms. The analysis in this chapter identified several significant findings.

The analysis revealed that, as NDIT would predict, all four thought-styles were present across the UK Insurer. All four thought-styles are present in groups as small as 15 employees in the same team or function, which is significant as it might be assumed that employees performing a similar role or working in the same office might align to the same NDIT thought-style. The qualitative feedback from each thought-style reveals different attitudes towards risk and risk management across the population, and on this basis, it is argued that the UK Insurer possesses four distinct risk cultures.

Further, analysis of the four thought-styles against the selected risk statements and qualitative feedback provides greater insight into how each risk culture presents; in the main this accords with what NDIT would predict. To recap: The Hierarchists are in favour of monitoring and controlling risk, though show a concern for commerciality in the event that risk management measures become stifling or excessive. The Enclavists (21% of respondents) also reflect a cautious approach to risk management though are sceptical about top-down decision-making, prefer risk management by consensus and seem way of the impact of risk and compliance teams on decision-making. The Isolates (17% of respondents) appear resigned to complying with the demands placed on them (as NDIT would predict) though there is a sense

of frustration and resignation towards the obligations placed on them. This sentiment is also present in the Individualist (7% of respondents) who suggest that prescriptive risk management measures have the potential to mask 'what is really going on', and support individual autonomy to address the specificities of a situation rather than just follow protocols.

The existence of four distinct risk cultures in UK Insurer has important implications for its approach to risk management. Firstly, it appears unlikely that one approach to risk management, in terms of protocols and behaviours will resonate with employees across the organisation. This is because it is argued that traditional Enterprise Risk Management (ERM) frameworks, based on clear roles and responsibilities, transparency and collaboration, are high-Group and high-Grid, and are therefore inherently Hierarchist. As a result, non-Hierarchist risk cultures may not fully embrace established set protocols, or engage with them superficially. Further, it is proposed that ERM represents a Hierarchist classificatory system supported by ritualistic activity, and, therefore, these Douglasian concepts are central to understanding cultural responses to risk management frameworks. Qualitative feedback from this study reveals that the four thought-styles respond differently to classificatory systems and rituals as part of ERM framework, which further delineates them as distinct cultures. Additionally, the survey results suggest that multiple risk cultures influence the way in which risk information is generated, controlled and shared through the use of language, terminology and professional boundaries. This has the potential to be amplified by mistrust between risk cultures (for example, Hierarchist and non-Hierarchist groups) in sharing and consuming information.

It is argued that the prevalence of Hierarchism in the UK Insurer is not surprising given the public scrutiny and level of Regulatory supervision applied to the FS industry since the 2008 financial crisis, which may have helped to cultivate FS organisations that are predominantly high-Grid and high-Group. Furthermore, it is argued that the prevalence of Hierarchism can be considered advantageous to the UK Insurer in maintaining stability and considered risk-taking across a complex organisation comprising multiple business lines and technical financial products.

The conceptualisation of risk culture presented by NDIT is a significant departure from that of the UK FS Regulator. The Regulator appears to regard risk culture in terms of tangible manifestations of governance, rewards, purpose, and leadership style, and holds that a monolithic risk culture can be created. The influence of Group and Grid in Douglasian theory challenges the Regulator's assumption that a desirable risk culture can be created 'top-down' through leadership role modelling and individual accountability. Additionally, the Regulator's understanding of risk culture is unable to account for the

emergence of cultures that are not in line with leadership role-modelling or for the emergence of conflict, whereas NDIT accounts for the existence of multiple interacting cultures.

As highlighted in Chapter 1, existing academic research into risk culture in the FS industry is relatively sparse. Theories proposed by researchers such as Powers et al (2013) and Mikes (2009; 2011) explore risk culture through tangible and empirical manifestations. However, these theories do not have the advantages of NDIT in terms of transmutability across multiple contexts, nor do they propose a causality of culture (Group and Grid dynamics) or have the ability to explain sources of conflict and behaviour that does not align to a dominant culture. It is argued that the application of NDIT to the study of risk culture in FS firms offers significant additional explanatory insight into risk decision-making, risk communication, adoption of risk management frameworks and conflict.

The next chapter will evaluate the methodology used by this study to understand the risk culture in the UK Insurer. It will include an assessment of the Group and Grid survey questions, the ranked risk statements and qualitative comments, and an evaluation of the mixed methods approach for NDIT studies. This will help to inform the approach to future NDIT studies on risk culture.

CHAPTER 6: Evaluating NDIT Research Methodology

6.1: Introduction

This chapter addresses research question 2 - *How do the risk perceptions and risk cultures compare under the three research methods and what are the implications for researchers employing NDIT?* - by using the data obtained to critically assess NDIT research methods.

As an evolving 'grand theory' of organisations, NDIT continues to be debated, in particular how to interpret the theory and the nature of Group, Grid and the four thought-styles. Further debates revolve around which research methodology(ies) are most appropriate to employ for NDIT studies. As explained in chapter 3, all research method approaches used across NDIT and Douglasian Cultural Theory have associated challenges, including issues of circularity, low internal consistency for quantitative surveys, and unclear alignment between the research instruments and Douglasian theory. For example, when survey instruments are designed and used to measure the four worldviews (see, for example, Dake, 1992) or risk statements that align to worldviews are used by researchers in their studies (see, for example, Thompson, 2016), it can be argued that problems of circularity emerge. Other NDIT-related survey instruments which seek to capture broad socio-political attitudes (see, for example, Dake 1992; Boyle & Coughlin 1994) rather than context-specific data might be criticised on the grounds that, for example, these attitudes are not demonstrably linked to the Douglasian concepts of Group and Grid. Furthermore, where quantitative surveys for NDIT studies have been used, they typically do not return an acceptable level of internal consistency (Cronbach's alpha) and can also present positive correlations between theoretically opposing thought-styles (see, for example, Rippl, 2002). Additionally, where qualitative data is obtained via focus groups it tends to be analysed by drawing on typical conceptualisations of the four thought-styles, rather than triangulated with other sources of data to build insight and assess validity across the data set as a whole. The possibility of researcher bias in designing worldview-based survey instruments also remains, as Douglas articulated in *Being Fair to Hierarchists* (Douglas, 2013). This study addresses identified shortcomings in NDIT-related research methods and develops insights into the merits of each method used in this study. Debates concerning which research method(s) to employ in NDIT research projects arise in general, at least in part, because of the inherent complexity of NDIT and the inherent difficulty in measuring thought-styles.

This chapter first evaluates each part of the survey instrument (Part 1 – Group and Grid questions, Part 2 – Risk statements and Part 3 – qualitative feedback) in turn. The next section 6.2 evaluates the effectiveness of the Group and Grid survey instrument in identifying NDIT thought-styles in the UK

Insurer. To do this, criteria for assessing the effectiveness of the Group and Grid survey instrument are proposed. Section 6.3 then assesses the degree to which the Group and Grid questions have been successful in capturing the underlying Douglasian concepts and proposes alterations that might be made to further improve the accuracy of the survey instrument for future studies. Sections 6.4 and 6.5 evaluate the risk statements and qualitative feedback respectively as methods for identifying NDIT thought-styles, and this includes discussions of potential areas of subjectivity in how these methods are designed and the results that arise from employing the method are interpreted. The chapter concludes with an evaluation of the mixed method approach used in this study in section 6.6 and a discussion of the benefits and challenges associated with using mixed method approaches in NDIT research.

6.2: Review of Group and Grid survey instrument

This section assesses the effectiveness of the Group and Grid survey instrument in capturing distinct NDIT thought-styles. One way of judging Group and Grid is to establish whether it produces results that align with key aspects of the theory. Three criteria are proposed to assess this which are rooted in the NDIT framework depicted across Douglasian literature and referenced in chapter 2 (Fig 2.2, fig. 2.3).

- Requisite variety: Douglas maintains that institutions possess a minimum of four thought-styles. Therefore the Group and Grid survey instrument must return varying responses to the Group and Grid questions in order that they can be analysed to produce four distinct thought-styles. If there is no differentiation in responses to the Group and Grid responses then it will not be possible to determine different thought-styles.
- Sufficient distinction across each of the four thought-styles: NDIT maintains that each thought-style possesses distinct opinions on how risk should be managed. Therefore the thought-styles derived from the Group and Grid questions should correlate to difference in sentiment when triangulated with Part 2 and Part 3 of the survey (the risk statements and qualitative feedback).
- Discriminant validity: NDIT would predict that theoretically opposing thought-styles (such as Hierarchism and Individualism) possess contrasting views on how risk should be managed. Therefore there should be a distinct contrast of opinion evident in the data from Part 2 and Part 3 of the survey (risk statements and qualitative feedback) for theoretically opposing thought-styles derived from the Group and Grid questions.

The next section assesses the survey instrument against each of these criteria in turn.

6.2.1 Requisite Variety

The requisite variety of responses from the Group and Grid questions can be established with reference to the spread of responses and standard deviations of each question. The analysis in Chapter 4 shows that each question elicited the full range of responses against the 1-7 Likert scale. The results also show standard deviations of 1.114 - 1.722 for the Group questions (table 4.3) and 0.934 - 1.870 for the Grid questions (table 4.9), which show a broad dispersion of responses around the mean for each question. This indicates the questions are capturing a wide range of sentiment from the surveyed population.

Consequently, the wide range of responses to each of the Group and Grid questions enabled four NDIT thought-styles to be derived from the data. To recap, the thought-styles were derived by categorising the question responses as either high / low Group or high / low Grid according to their position relative to mean of each question, then, an average score obtained across all Group and Grid questions which categorised respondents as high / low Group or high / low Grid. Using this methodology enabled respondents to be categorised into the four thought-styles according to their aggregate scores to the Group and Grid questions. It is therefore argued that the Group and Grid questions satisfy the first criteria of requisite variety by obtaining four NDIT thought-styles from the data.

Furthermore, the results and analysis also show a requisite variety of all four thought-styles has been met in groups of as low as 15 people, including individuals from the same team or location. NDIT theory would expect such a variation, because Douglas maintains that all four thought-styles are present in all institutional settings - and the questions have been successful in identifying this. However, whether the questions fully capture the underlying constructs of Group and Grid (content validity) is yet to be ascertained, and this is discussed in detail in section 6.3.

6.2.2 Distinction and discriminant validity across thought-styles

The second and third criteria for evaluating the Group and Grid questions is assessed in this section. If the Group and Grid survey questions have been successful in identifying thought-styles in the UK Insurer, the results should reveal differences in the responses to part 2 of the survey (risk statements) and part 3 of the survey (qualitative feedback) according to the thought-style identified in part 1. There should also be a contrast in sentiment between thought-styles that are theoretically opposed in NDIT (discriminant validity).

Chapter 5 discusses the areas of commonality and difference across the four thought-styles in their attitude towards risk management. The sampled population has elements in common, including a high level of interest in Cyber and Customer Service risks, a bias towards the Hierarchist risk statement, and a level of scepticism (as evidenced in the balance of negative sentiment in the qualitative comments) towards how risk is managed in the UK Insurer. However, there are three elements that suggest distinct attitudes towards risk across the sampled population. Firstly, when selecting the risk statements Hierarchists were least likely to select the Individualist statement, and the Individualists were least likely to select the Hierarchist risk statement; this is an example of discriminant validity and accords with NDIT. Additionally, Isolates were more likely to prefer the Individualist statement, which indicates some dissatisfaction with the Grid obligations placed on them, which again accords with what NDIT might expect them to feel. Secondly, and more significantly, the Group and Grid survey questions triangulated with the qualitative comments reveal a demarcation of language and terminology, as detailed in table 4.20. Examples are the Hierarchist usage of ERM terminology when describing risk management practices, and the Isolates' frequent use of the UK Insurer's name, indicating a sense of detachment consistent with NDIT. Finally, the sentiment in the qualitative feedback towards risk management varies across the four thought-styles, as evidenced in table 4.21. For example, there is a clear interest of Individualists in autonomy and empowerment, perception of unnecessary and unclear demands from Enclaves, and concerns about blame and lack of transparency from Isolates. This again suggests that the Group and Grid questions have been successful in identifying four NDIT thought-styles.

To conclude, whilst the results reflect a discernible Hierarchist bias and elements of commonality across the surveyed population, it is argued the Group and Grid survey instrument has been successful in identifying four thought-styles in the organisation as NDIT would expect. This subsequently enabled discussion and comparison of each NDIT thought-style as distinct risk cultures in Chapter 5.

6.3: Review of Group and Grid survey questions

The next section considers the content validity of the Group and Grid questions. Whilst it is possible to argue that the Group and Grid survey instrument has been successful in capturing distinct risk cultures, consideration will now be given to assessing whether the questions themselves fully capture the Group and Grid dynamics as conceptualised in Douglasian theory. This is important for future NDIT research that captures NDIT thought-styles by measuring the underlying Group and Grid dynamics rather than the thought-styles themselves.

Whether the Group and Grid survey questions have successfully captured Group and Grid as underlying independent variables can be initially determined by the Cronbach alpha score for each set of questions. As detailed in Chapter 4, the Cronbach alpha is higher for the Group questions (0.84) and lower for Grid (0.43). This initially suggests that the Group questions have been more successful in capturing the underlying Group dynamic than those for Grid have for the Grid dynamic. As described in chapter 3, the Group and Grid questions were prepared following the same approach and were derived from 'predicates' sourced from the work of Gross & Rayner (1985) and Hampton (1982). Therefore, the reason for the variance in internal consistency is not immediately clear. The next section will consider the results and assess whether any amendments should be made to the Group and Grid questions to improve content validity and ability to capture the underlying Group and Grid dynamic.

6.3.1: Group questions

The Group questions returned a high internal validity Cronbach alpha score (0.84), and from this it may be easier to conclude that they have successfully captured the underlying Group dynamic. However, the results also contain two EFA components – as shown in section 4.2.3 and table 4.6. The first of these relates to individuals working together as a team, and the second relates to individuals acting on inputs and contributions from other areas. The presence of two EFA components in the results alongside a high Cronbach alpha score suggests that the concept of Group may not be unidimensional, i.e. it may contain more than one underlying attribute or variable. The implications of this result for NDIT theory will be considered in Chapter 7, where the nature of the Douglasian concepts of Group and Grid continue to be debated. However, because the Group questions were derived from predicates sourced from existing Douglasian literature, and have reflected a high internal consistency score, it is argued that no revisions to the Group questions used in this research are necessary.

6.3.2: Grid questions

This section considers the content validity of the Grid questions used in this research. The Grid questions returned a lower internal consistency Cronbach alpha score ($\alpha = 0.43$) and returned four EFA components, as shown in section 4.3.3 and table 4.14. The results imply that either the Grid questions could be revisited to improve internal consistency or the concept of Grid as part of Douglasian theory could be revisited. The implications of the results for Douglasian theory will be discussed in Chapter 7. This section will consider opportunities for refinement of the questions, though it is worth noting that it was argued in Chapter 4 (section 4.4.2) that increasing the Cronbach alpha by removing questions from the set of Grid questions could compromise the theoretical integrity of Grid. That is, there is a risk that

improving the Cronbach alpha score will remove predicates that might be theoretically integral to the Grid dynamic. Table 4.17 also shows that removing questions does not significantly alter the conclusions derived from the data on the cultural mix in the UK Insurer. Therefore, it is not proposed that comprehensive changes are made to the Grid questions, rather that some Grid questions could be refined or omitted as is considered below.

There are three questions that improve the Grid alpha score, although not to any great extent, to $\alpha = 0.458$ when removed. They relate to EFA components 3 and 4 (20% of variance), and are:

- Q15: *Getting the right input from experts is vital for company success*
- *Q19: I often need to react to things outside of my control*
- *Q22: The office space around me is restricted to people in particular roles or people in more senior roles*

Each of these questions will be reviewed in turn. Firstly, Q15 appeared to be anomalous when compared to the other questions, as the results were significantly positively skewed. Skewness, a measure of symmetry, is the level to which the statistical distribution is positively or negatively distorted. Q15 indicates a broad consensus across the UK Insurer on the role of experts in the organisation. An explanation is that the role of specialists is a less divisive topic in the UK Insurer. Within the FS industry, it is accepted that certain types of experts play an essential role in achieving the objectives of the company – for example actuarial scientists and claims assessors. Alternatively, it may be that all four thought-styles welcome input from experts, and it is the type of expert sought, and the reaction to their expertise that differentiates them (6, 2021). If this is the case, then Q15 is not a wholly effective Grid question because it does not differentiate why input from experts is sought. Q15 was designed to capture the predicate proposed by Gross & Rayner of *Specialisation*, described as the proportion of the possible roles that an individual actually assumes during a time period (Gross and Rayner, 1985, pg.80). It may be that levels of specialisation and expertise across an organisation, and how these experts are perceived, is still a relevant element of the Grid dynamic. However, the question wording could be revisited to elicit a more differentiated response and to take account of the insurance industry context.

Questions Q19 and Q22 are now reviewed in turn. They represent EFA component 4 (20% of variance), which suggests that they are anomalous in relation to the other Grid questions. Q19 was designed to capture predicates from Hampton (1982) on *Control* and *Autonomy*, which can be described as the proportion of time individuals spend on activities that they can control themselves, rather than controlled by someone else. Whilst a sufficient spread of responses was obtained for Q19, it can be queried whether the predicate or question is a true representation of Grid. It seems likely that individuals operating in low-

Grid environments must also react to events outside of their control, and what might better distinguish respondents is how individuals react to these events (6, 2021). For example, individuals working in low-Grid environments may expect more autonomy in how they respond to events outside of their control and may not expect to control the work of others around them. By contrast, individuals working in high-Grid environments may expect to respond with urgency, and may expect the work of others around them will be controlled in accordance with authority levels. Therefore, the Grid question relating to *Control* and *Autonomy* predicates (Q19) could be revised to ascertain how respondents expect to respond to unexpected events.

Q22 was designed to capture the Insulation predicate from Hampton (1982) involving the segregation and delineation of office space dependent on role and level of seniority. This question is potentially less relevant post Covid-19 pandemic where workplaces have adopted flexible working arrangements and virtual collaboration instead of strictly organised office environments. Regardless, the lower internal reliability for this question suggests review of the wording is required. Furthermore, it is possible that level of Grid is chiefly informed by informal segregation according to social 'rules' rather than formally allocated spaces (6, 2021). This would mean that the question in its current form has the potential to be interpreted differently depending on whether the respondent thinks that it refers to just formal segregation or socially driven informal segregation. It is proposed that Q22 is revised to ensure that it reflects segregation of workplace facilities in a way that is meaningful for the working arrangements in the organisation and incorporates informal as well as formal segregation.

Whilst it is not proposed that questions are removed from the Grid question set, it is worth considering which Grid questions show the strongest evidence of being attributed to the Grid dynamic. There are six questions that returned stronger inter-item correlations (of above .2) with at least one other Grid question. These six questions include four questions (Q14, Q16, Q20, Q21) that returned the highest alpha score (.549) of any question combination. The six questions relate to status differences, prescriptive roles and procedures, and the consequences of procedures not being followed.

- *Q12: My grade / seniority and role in the company determines how I should act*
- *Q13: I change my approach to dealing with people depending on whether they are more senior or junior than me*
- *Q14: I have a highly defined role with a very distinct set of responsibilities*
- *Q16: I tend to work within the boundaries of my role*
- *Q20: I stick to processes, procedures and standards in the way I perform my role*

- *Q21: In my team, if processes, procedures or standards are not adhered to, action will be taken to find out why*

The results suggest that of the 11 Grid questions, the 6 above are most likely to correspond to the latent Grid variable. Therefore, future studies that seek to measure Group and Grid could consider adopting these questions, or, could amend the wording of the questions whilst retaining the underlying Grid predicates.

Finally, future studies could also consider whether the phrasing of the Grid questions should be amended to prompt a more accurate portrayal of how Grid manifests within the organisation. The phrasing of the Grid questions asks respondents what they do, rather than what they see others doing around them. For example, 'I change my approach' and 'I tend to' might elicit responses about what people say they do rather than what is expected of them in a high Grid environment. The questions were worded in this way to allow respondents to provide a fully autonomous view of how they as individuals behave, rather than one that reflects their perception of how others around them behave. However, altering wording to what they and their colleagues are expected to do in their working environment might elicit a different and potentially more accurate reflection of the Grid dynamic. It may also be less likely to generate potential social-desirability bias in their responses (that is, providing responses that they think the researcher expects to receive).

6.3.3: Review of Group and Grid survey instrument: Conclusion

To summarise, the new survey instrument developed as part of this study has provided sufficient delineation of risk cultures in the UK Insurer, as argued in section 6.2.1 and 6.2.2 above. However, there appear to be opportunities to improve the reliability of the instrument in capturing the underlying Douglasian concepts of Group and Grid, particularly for the Grid questions. There are three Grid questions (Q15, Q19, Q22) that could be refined because they have not sufficiently delineated responses in the sampled population, and could be amended to improve content validity and alignment to NDIT theory. Future studies could amend the wording of Grid questions to obtain information on behavioural expectations within the organisation, rather than what an individual actually does. Additionally, as NDIT theory evolves, further consideration could also be given to whether the Grid questions sufficiently cover all elements of the Grid dynamic. Depending on the interpretation of Douglasian literature, additional concepts could be incorporated into a survey instrument seeking to measure Grid. For example, future

research may consider measuring the presence of authority in the organisation and respect for authority, or, whether there are means to circumvent prescribed rules (6, 2021).

Whilst some of the Grid survey questions could be revisited, it is maintained that measuring NDIT thought-styles using Group and Grid questions that are context-specific overcomes several issues associated with prior NDIT research. The Group and Grid questions are context-specific to the organisation and use familiar terminology, therefore, prompt for information about the UK Insurer's organisational dynamics rather than general opinions. However, they are also sufficiently generic that they could be deployed in other organisations to obtain data for comparative purposes. The Group and Grid survey instrument has overcome the problem of circularity in attempting to measure pre-determined ideational worldviews as is common across Cultural Theory research – that is, questions are designed that are supposed to reflect the opinions of each NDIT thought-style and respondents are measured against these. Though there is more work to be done on content validity for the Group and Grid questions, the survey instrument was developed by carefully grounding it in existing NDIT theory, which research methods from prior studies (whether survey, ethnographic, focus groups) do not always evidence. At each stage of their formulation, the Group and Grid survey questions were designed to gather data on ways of working in UK Insurer that accord with the Douglasian elementary concepts of Group and Grid, and as far as possible, remove ideological bias or interpretation on behalf of the researcher. Consequently, it can be argued that these survey results are more conceptually aligned to Douglasian theory than those deployed in previous NDIT studies and are therefore more likely to reflect each of the four NDIT thought-styles.

Whilst the Group and Grid questions are considered the primary determinant of NDIT thought-styles in this study, consideration is now given to the other two methods – the preferred risk statements (Part 2 of the survey) and the coded qualitative comments (Part 3). As part of a mixed methods approach, each part of the survey was deployed to obtain a nuanced view of NDIT thought-styles within the UK Insurer, and to compare and contrast the merits of each research method for NDIT studies. The results in section 4.5 and 4.7 show that the three methods of determining thought-styles do not exactly align and, if deployed in isolation, would have produced different conclusions about the risk culture in the UK Insurer in Chapter 5. The next section will discuss the ranked risk statements and qualitative feedback as secondary methods of determining NDIT thought-styles, and evaluate whether any improvements should be made to the improve the accuracy of the survey instrument and alignment of the results to part 1 of the survey (Group and Grid questions).

6.4: Review of Risk Statements

The risk statements (part 2 of the survey) were prepared to encapsulate the typified views of the four NDIT thought-styles towards risk management. This is reminiscent of the research performed by Underwood et al. (2014), where four distinct attitudes towards were defined during the study that correlate to each of the four NDIT thought-styles – Conservator (Enclave), Manager (Hierarchist), Maximiser (Individualist), Pragmatist (Isolate). This study has utilised and further developed the criteria underpinning the four risk statements in accordance with NDIT, detailed in *Appendix 6*.

An individual's response to Part 2 of the survey should, if the risk statements are appropriate accurate indicators of worldview, correspond to the responses in Part 1 (Group and Grid questions). Similar to the Group and Grid survey questions, the risk statements indicated that Hierarchism is the dominant cultural bias in the UK Insurer, with 40% (217 of 543 respondents) selecting this as their preferred statement, followed by Enclavism (26%). Whilst this suggests a bias towards Hierarchism and Enclavism, as with Part 1 of the survey, the results in table 6.1 shows that overall, there is a relatively modest correlation between the Group and Grid-derived thought-styles (part 1 of the survey) and the selected risk statements (part 2 of the survey). There is a particularly low correlation between respondents that are classified as Isolates in part 1 of the survey and the Isolate risk statement, with only 3% selecting it.

Table 6.1: Cross-tabulation of preferred Risk Statement and Thought-Style

	Group / Grid Question Thought-Style				
#1 Preferred Risk Statement	**Enclave**	**Isolate**	**Hierarchist**	**Individualist**	**Total**
Enclave	**28%**	24%	30%	22%	**26%**
Isolate	7%	**3%**	7%	14%	**6%**
Hierarchist	36%	44%	**47%**	42%	**40%**
Individualist	30%	28%	16%	**22%**	**19%**
Total	**21%**	**17%**	**55%**	**7%**	

There are three potential reasons for the different results and depiction of NDIT thought-styles between Part 1 (Group and Grid questions) and Part 2 (risk statements) of the survey. These are considered below. Firstly, it may be that the Group and Grid questions have not accurately captured the latent underlying variables, though it is argued in section 6.3 that a sufficient depiction of NDIT thought-styles has been obtained from the questions and subsequent analysis.

Secondly, it is possible that there is a weak or imprecise relationship between the Group and Grid dynamics and the way that risk management is conceptualised by the four risk statements in *Appendix 6.*

Despite the risk statements being developed with reference to existing literature and prior studies that analysed attitudes to risk using NDIT (for example, Thompson & Ingram, 2016), the attitudes towards risk exemplified in the risk statements still remain open to debate by NDIT researchers. Future research might improve the correlation of results between part 1 and part 2 of the survey by revisiting both the Group and Grid questions (as discussed in section 6.3 above) alongside the risk statements for theoretical alignment to NDIT.

A final possible explanation for the disparity between part 1 and part 2 of the survey is that the risk statements are subject to social desirability bias and reflect espoused preferences of the respondents, rather than their experience of Group and Grid dynamics. This would explain why there is a weaker correlation between part 1 of the survey which measures experience of Group and Grid, and their attitudes towards risk management. Social desirability can be defined as impression management (to look better to others), self-deception (to feel good about themselves), or to define personal identity (Larson, 2019). This presents an issue for NDIT research because respondents' espoused views towards risk management could be influenced by factors other than underlying Group and Grid dynamics. Social desirability bias may have arisen in this study for the following reasons: Firstly, it is possible that respondents tended towards statements that they felt that they should select – perhaps to manage the impression of them or their team, or to align to the expectations of their role. Organisational conditioning, reward and remuneration practices within a highly-Regulated FS firm may influence respondents towards a statement that is aligned to Hierarchism (referencing a robust risk management framework) or Enclavism (that references a prudent approach to risk taking). Conversely, selecting the Isolate or Individualist statements, even as part of an anonymous survey, may feel challenging for respondents as it is at odds with how the Boards and Regulators of FS firms typically conceive of risk management. The degree of bias may be accentuated by the researcher's senior risk management role in the firm, in that some respondents may have selected the risk statement that they thought the researcher would expect them to choose.

Furthermore, some results suggest that the risk statement selection may be influenced, to a degree, by social desirability bias related to demographic characteristics. That is, demographic variables also have the potential to influence the risk statement selected. For example, table 4.26 shows that male respondents were almost twice as likely to select the Individualist risk statement than female respondents – 26% versus 14% and correspondingly, females were slightly more likely to select the Hierarchist, Enclavist and Isolate statements. These differences may therefore reflect how the individual perceives themselves and have selected the risk management style they think is expected of them. Similarly table

4.27 shows that junior management grades were more likely to select the Hierarchist and Enclavist statements that reference a robust and cautious approach to risk management. This could mean that these staff are heavily influenced by the dominant cultural biases and have selected the statement that they think reflects senior management expectations. There are also some variances by business area – for example, table 4.28 shows that the product and distribution teams were more likely to select the Individualist statement (where the roles focus more on autonomy and commerciality) than the support areas such as Risk and HR (where the roles are more structured and collaborative in nature). This could mean that risk statement selection is influenced to a degree by the type of role that people perform and the expectations that they feel are placed on them to succeed in these roles.

To summarise, there is some evidence of bias, potentially driven by demographic identity, seniority and role types influencing the selection of risk statements. This means that the selection of preferred risk statements may not provide an accurate view of NDIT thought-styles as the results contain individual bias and do not fully reflect how the organisation is influenced by the Group and Grid elementary forms. This is significant because NDIT research should, as far as possible, seek to identify four NDIT thought-styles in a manner that is reflective of Douglas' two elementary forms and reduce the impact of influences like social desirability bias on a study's results.

It is therefore worth considering the effectiveness of the risk statements and similar survey instruments that use sentiment ranking to assess thought-style or experience of Group and Grid (such as those used by Jenkins et al, 2011, and Boyle and Coughlin, 2019). It could be argued, that when used in isolation, selecting risk statements appears to be a less reliable method of identifying NDIT thought-styles than the Group and Grid questions, because of issues such as social-desirability bias that introduce subjectivity into the response. For this study, it is argued that the risk statements have provided additional insight into the espoused attitudes of the surveyed population towards risk management, which is explored in chapter 5. Additionally, the data from the risk statements provide a basis for a discussion on the role of personal opinion (described as 'private thought' and 'private philosophy' in Douglas (2002)) and agency in the NDIT model, which is explored in detail in chapter 7, section 7.3. The results from this study suggest that personal opinion might be at odds with the experience of social organisation (Group and Grid dynamics), which would not have been identified unless both the Group and Grid questions (part 1) and the risk statements (part 2) were used. Furthermore, the potential for biases or personal opinion to influence the selection or ranking of statements in NDIT or CT research seems under-explored by existing work on NDIT research methodology, nor do existing NDIT studies outline how to account for disparity between personal opinion and social organisation. Some NDIT authors do acknowledge that individual

attitudes may not directly correlate with worldviews (Boyle and Coughlin, 2019) and further, that responses to NDIT surveys may vary according to context to which they relate (for example work or home environments) due to individuals possessing 'multiple selves' that possess different views depending on the context of the research (Verweij, 2011). However, these observations do not ascertain the role of private thought and individual biases (such as psycho-social bias) in NDIT and how to account for them in research design and results interpretation.

Finally, one amendment to the design of the risk statements is proposed should they be utilised in future research. A small number of respondents commented at the end of the survey that they found selecting a preferred risk management statement difficult because they agreed with some parts of the statements but not all. It may be beneficial therefore to split the statements into individual sentences aligned to each of the four thought-styles and ask respondents to select which they most agree with; this may provide a more precise view of how the Group and Grid dynamics correspond to individual sentiments about risk management.

6.5: Review of Qualitative Feedback

The following section evaluates the qualitative feedback obtained in part 3 of the survey and assesses its overall contribution to the study. The section then discusses three main factors that could drive subjectivity into the capture and interpretation of qualitative data in this study, and how these could be mitigated in future research.

Qualitative feedback was obtained in response to the question: *Do you have any other feedback about how this organisation manages risk?* The sentiments and language were coded and presented in table 4.32. The question elicited a surprising number of responses and level of detail, with a total of 100 usable responses of 543 survey participants. The qualitative data has made a significant contribution to this study. It has enabled closer examination of how the four NDIT thought-styles manifest as risk cultures in the UK Insurer, including cultural responses to risk frameworks, risk communication and decision-making - as detailed in Chapter 5. In this way, a mixed method approach combining quantitative data with qualitative data has helped this study to achieve its stated aims.

However, the data in table 6.2 below shows that the coded qualitative comments produce a view of NDIT thought-styles that contrasts with that derived from parts 1 and 2 of the survey. Notably, 36% of respondents returned a comment that has been interpreted as Individualist, and Individualism appears to

be the dominant thought-style in the UK Insurer. This contrasts with the data from the Group and Grid questions and risk statements, both of which portray the UK Insurer as predominantly Hierarchist and Enclavist. 33% of the qualitative comments are coded as Hierarchist, 25% Enclave and 7% Isolate. Furthermore, just 37% of the coded comments directly match the thought-styles indicated by the Group and Grid survey questions.

Table 6.2: Cross-tabulation of Thought-styles and Qualitative Comments

	Qualitative Comment-derived thought-style			
Group and Grid-derived thought-style	**Enclave**	**Isolate**	**Hierarchist**	**Individualist**
Enclave	33%	0%	29%	38%
Isolate	12%	12%	24%	53%
Hierarchist	24%	9%	38%	29%
Individualist	33%	0%	33%	33%
Total	25%	7%	33%	36%

The disparity between the qualitative comments and those from parts 1 and 2 of the survey warrants further investigation. Three main factors have been identified that could introduce subjectivity into the collection and interpretation of qualitative comments and may explain the disparity. These should be considered for future adoption of qualitative methods in NDIT studies, whether as a standalone research method or as part of a mixed method study. The implication of these factors is that the qualitative comments may not wholly and consistently reflect either the NDIT thought-styles or underlying Group and Grid variables, which is a primary aim for NDIT research.

6.5.1 Accurate interpretation and coding

The first factor that may introduce subjectivity into the qualitative data in this study is accuracy of interpretation and coding. The comments themselves show that attitudes towards risk are often complex and nuanced, and they can contain sentiment that is either ambiguous or contradictory, and may not clearly align to one NDIT thought-style. In this study, the categorisation of comments into thought-styles has been based on 'best fit' and sense-checked with the supervisory team to remove interpretation bias as far as possible. Examples of qualitative comments that align well to an NDIT thought-style include:

We have robust risk management systems in place. I work mainly on supplier risks, therefore, we have business standards & frameworks that support the activities on overall governance and risks that need to be mitigated. I think we are very risk aware. (Hierarchist comment)

The company misses opportunities because it is so risk averse meaning there is a barrier to change. (Individualist comment)

However, some of the comments contain sentiments from multiple thought-styles making categorisation into one more difficult. An example is below, which could be classified by an NDIT researcher as Individualist (concerned about the restrictions associated with risk management) or Hierarchist (concerned about both commerciality and control), or Isolate (a sense of restriction):

Our risk focus is very good and sometimes too restrictive. We need the ability to successfully trade as well as managing risk.

Additionally, some comments originate from different thought-styles but are similar in sentiment and therefore difficult to categorise. NDIT would expect this to happen, as common sentiments exist across thought-styles with the Group or Grid dynamic in common. For example, whilst Hierarchists and Enclavists possess different attitudes towards risk management, with Hierarchist favouring calculated risk-taking, and Enclavists favouring caution, they both favour a prudent approach which is evidenced in these comments:

"There is a lot of time allowing people the freedom to think, in an attempt to get the best decisions. There is rarely a rash decision, which then means that they take longer, but at least there is confidence that most things have been thought of." (Hierarchist comment)

"Risk and Governance are the foundation of the company and need to be taken seriously. Customer service is a great priority but cannot come at the expense of Risk." (Enclavist comment)

To summarise, the above examples illustrate that there is a degree of subjectivity involved in accurately interpreting and categorising qualitative feedback which makes it more difficult to accurately determine the four NDIT thought-styles.

6.5.2: Insider Bias

The second factor that may introduce subjectivity into the qualitative comments is the researcher's insider status. As the researcher is a senior risk leader in the organisation, it may be that respondents felt more or

less compelled to voice concerns and issues about risk management in the UK Insurer. This can be described as 'informant bias' (Fleming, 2018), where participants may seek to share detailed or personal perspectives with someone who 'understands'. Therefore, sentiment in the qualitative comments may have been influenced by how the researcher is perceived by the respondents. Alternatively, some participants may have viewed it as an opportunity for their voice to be heard and to drive change (despite the survey introduction clearly stating that the data collection would not be used to drive action). It is possible that the nature of an anonymous survey, in addition to the researcher's role in the organisation, has influenced the type of sentiment provided by respondents. Furthermore, this introduces the possibility that the qualitative data represents privately held opinions, and may be different to individuals' experience of Group and Grid dynamics within the organisation. This would explain the disparity in NDIT thought-styles collated in table 6.2. Arguably, therefore, the qualitative feedback may be a less reliable representation of the NDIT thought-styles in the UK Insurer, than part 1 (the Group and Grid questions).

6.5.3: Nature of open qualitative question

The third factor that may make accurately deriving NDIT thought-styles from the qualitative feedback more difficult is the nature of the open question. The qualitative feedback was obtained at the end of the survey and was an 'open' question that allowed respondents the opportunity to express opinion in an anonymous manner. Broad sentiments were coded from the data to reveal whether respondents feel positively or negatively towards risk management practices in the organisation. Just 10% of respondents appear wholly satisfied with current risk management practices, with the remaining either negative or providing suggestions for improvement. Where respondents have been critical of the UK Insurer's approach to risk management, they have most frequently referenced excessive and stifling processes and lack of commerciality. This may explain why Individualism appears to be the dominant risk culture in the UK Insurer (36% of respondents) when the coded qualitative comments are viewed in isolation, because Individualists are critical of stifling process. However, this sort of sentiment is not necessarily reflective of the social patterns – namely the influence of Group and Grid – in the organisation. Future research could obtain qualitative feedback in an alternative way, for example asking respondents to comment on specific risk management practices, or as part of a structured interview process. This might generate a balance of negative and positive feedback from respondents and reduce the potential for data to contain personal misgivings.

Finally, it should also be acknowledged that participants were not required to give responses to this part 3 of the survey. 100 participants provided responses in this section of the survey compared to 543 responses for part 1 of the survey. Therefore, less than one-fifth provided responses to part 3 in comparison to part 1. This may have resulted in a biased response; for example, Individualists being more willing, or having a greater desire, to provide these comments, leading to bias in the coded sentiments. However, it is not possible to know if there is a bias in this respect or how it may have impacted the results for part 3 of the survey.

To conclude, analysis of the qualitative feedback shows that – as with the ranked risk statements - there is sometimes a misalignment between the espoused attitudes or private thought of individuals and the social patterns in an organisation that are underpinned by Group and Grid. This emphasises that it may be challenging for qualitative NDIT research to accurately delineate the four thought-styles, even when a precise coding scheme is used to categorise responses.

This however does not make the data in the qualitative comments any less valid or useful to the aims of this study. The qualitative comments have provided substantial detail on how the four thought-styles in the UK Insurer understand risk management, which enabled the implications for Enterprise Risk Management (ERM) policy, communication and decision-making to be evaluated in Chapter 5. They also evidence that the topic of risk management, as perceived across the four thought-styles, can be a source of dissatisfaction and potential cause of conflict in the UK Insurer, and NDIT would predict that four thought-styles typically have contrasting perspectives on matters such as policy development.

6.6: Review of Mixed Methods Approach for NDIT Research

This section evaluates the impact of a mixed methods approach as part of this study, and the benefits of mixed method approaches for future NDIT research. As discussed in Chapter 3, the research design for this study was prepared with consideration of the limitations of both existing quantitative and qualitative methods. This study adopted a pragmatist research strategy and sought to capture the risk culture within the UK Insurer whilst simultaneously evolving NDIT research methods. It is argued that a mixed method approach for management studies using NDIT are optimal due to the depth and breadth of insight provided by both quantitative and qualitative data. It is also argued that there is potential to further mixed method approaches across NDIT research, but that the aims of the study, resources of the researcher, and interpretation of Douglasian theory (NDIT versus CT) might restrict studies to either quantitative or qualitative (single method) data collection.

Chapter 3 acknowledged that the method adopted in prior NDIT research is usually determined by the aims of the study, for example analysing the culture of a large population using quantitative surveys versus understanding sources of conflict across a population by examining qualitative case studies or conducting interviews. Therefore, NDIT research design and selected data collection methodologies can be considered successful if it allows the study to meet its aims. It is argued that the mixed method approach for researching risk culture in the UK Insurer has allowed this study to meet its aims. Specifically, the collection and triangulation of quantitative and qualitative data has enabled a large-scale analysis of risk culture in the UK Insurer, whilst also providing further insight into NDIT thought-styles and their attitudes towards risk management. This would not have been possible with just one part of the survey – i.e. just the quantitative or qualitative data collection. The quantitative data alone would have provided a depiction of the four thought-styles, though the implications of the thought-styles on the risk culture of the organisation would be much less apparent without the qualitative feedback. Similarly, the qualitative data alone would not have been the optimal method for determining NDIT thought-styles as part of a large-scale study, because as discussed above, there are issues of subjective interpretation by the researcher, and the potential for responses to contain bias. These types of issues would have to be closely mitigated were qualitative methods used for a large-scale NDIT study.

However, the qualitative data has provided a critical contribution to this study alongside the quantitative data. It has developed the understanding of how NDIT thought-styles manifest as risk cultures and the practical implications of four distinct cultures in the UK Insurer. This type of insight is invaluable for NDIT research in management studies, where the normative and practical implications of risk culture are a major interest. The qualitative data, in conjunction with the quantitative data, has supported an assessment of the results on the UK Insurer, specifically risk frameworks, communication and decision-making. It has also provided more detail on how NDIT thought-styles may typically manifest across organisations in response to the topic of risk management, which could have broader applicability outside of the UK Insurer for other organisations. Additionally, the qualitative feedback potentially reveals something significant about the role of personal opinion in NDIT, where private opinions seem to be at odds with public behaviours – and this will be discussed in Chapter 7 on NDIT theory. Overall, mixed method studies seem most appropriate for management studies where the aim is to understand the practical implications of the data and what this means for an organisation designing a management strategy. Mixed methods have been successfully used in this study to produce additional insight on both risk management in the UK Insurer, and the NDIT theory itself.

Given the success of the mixed methods approach in achieving the aims of this study, it is worth considering why mixed method NDIT studies are rare. It was noted in Chapter 3 that there have been few mixed method NDIT studies, though they are proposed by Douglasian scholars as a way of leveraging the strengths of quantitative and qualitative research, for example by using large-scale case study analysis combined with nested case studies, or surveys and case studies (Verweij, Luan and Nowacki, 2011) (Swedlow and Johnson, 2021). Whilst this is recognised as an area of exploration for NDIT research, there is an absence of major published studies utilising mixed methods. There are a few possible explanations for this. Firstly, the resource required to design an appropriate quantitative survey instrument, and an appropriate data collection method for qualitative input (such as designing and implementing survey questions, structured interviews and focus groups, followed by output cleansing and coding) could be significant, and may be disproportionate to the additional value and insight provided by mixed methods versus a single research method. Secondly, it could be that more than one method is simply not needed to achieve the research aims of the majority of NDIT studies. For example, where researchers like Kahan or Swedlow are seeking to understand the Cultural Theory worldview mix across a population and their attitude towards specific risks, a quantitative survey is sufficient for large-scale data collection and to assess relationships between data points. Thirdly, the skill and bandwidth of the researcher in deploying exemplary quantitative and qualitative methods may be a factor in determining the chosen research method, and additionally, researchers may find it more difficult to publish mixed method research. However, the results of this study emphasise the value of mixed method studies in NDIT research and their ability to analyse organisational culture whilst providing opportunities to evolve NDIT theory.

Finally, it is worth considering whether the absence of mixed method studies is partly due to the researcher's understanding of Douglas' theory. As explained in Chapter 2, some NDIT scholars regard Douglas' Group and Grid framework as positivistic and deductive, and it follows that thought-styles can be measured through a survey-instrument and triangulated, where needed, to other data points (such as demographics or socio-political belief systems) to provide a static view of culture. This approach seems to be most popular across Cultural Theory researchers (for example, Swedlow and Kahan), as they seek to define and measure worldviews (rather than thought-styles) across populations. Other NDIT scholars have been critical of the positivistic treatment of the Group and Grid framework, and the circularity inherent in the measurement of four thought-styles, which this study has also attempted to mitigate. For these researchers, NDIT provides an interpretive and dynamic model of social relations that are best viewed through a qualitative lens (for example, case studies, historical documents, interviews). Some argue that quantitative surveys lead to methodological individualism, which again, may not say anything

about the social relations of a population but the attitudes of individuals (Tansey, 2004). A qualitative method allows for examination of relationships between thought-styles and provides insight into the outcomes of social interaction as part of a causal framework. This interpretation of the theory, and its methodological application, is favoured by Perri 6 in providing a causal explanatory framework in the study of government decision-making (Perri and 6, 2014) and Ingram et al in their study of plural rationalities within Insurance firms (Ingram, Underwood and Thompson, 2014), for example. In both instances the researchers use the theory to explain the outlook and behaviours of social groups within a particular setting. This qualitative approach does not claim that the thought-styles have any fixed values or ideas (and are hence not 'worldviews'). It is nonetheless possible for qualitative application of NDIT to result in heuristic and misleading interpretations of culture, as exemplified in *Risk & Culture* (1983). However, the application of methods also appears to be somewhat contingent upon the understanding of Douglas' theory – specifically, whether an NDIT (focused on the elementary forms of Group and Grid; and focused on causal social interaction) or Cultural Theory (measurement of worldviews and risk attitudes across a population) interpretation of Douglas' work is central.

It therefore follows that mixed methods could be deemed less desirable for NDIT research where the outputs (i.e. quantitative and qualitative data) present potential conflicts with each other, or undermine the premise for NDIT application. For example, a quantitative survey in the style of Dake, Kahan or Swedlow will depict the worldview mix across a target population, which can then be used to inform a discussion of policy-making or risk-taking. However, the provision of qualitative data in addition (perhaps gathered via a survey or focus groups) might contain information that undermines assumptions regarding the worldviews and therefore makes the data less valuable or conclusions less cogent, unless disparities could be explained.

As explained in sections 6.4 and 6.5 above, the three methods for determining thought-styles across the UK Insurer do not produce identical results or correlate strongly with each other. The pragmatist research paradigm and experimental nature of the survey instrument has allowed for deep examination of the disparity between the three methods for determining thought-styles, whilst analysing risk culture in the UK Insurer. However, the majority of NDIT researchers will be beholden to one conceptualisation of Douglas' work – either in the NDIT or Cultural Theory tradition – and working towards a specific research aim that requires just one source of data. There is therefore no additional benefit for these researchers to obtain additional data that may introduce contradictory results. This therefore explains the paucity of mixed method NDIT studies and why researchers may be reluctant to collect and triangulate multiple sources of data.

6.6.1: Mixed Method Key Learnings

This section considers key learnings a result of deploying mixed methods to enhance general understanding of mixed method research in the field of management studies. Chapter 3 outlines the benefits and potential drawbacks of mixed method research and the associated pragmatism paradigm. Namely, mixed methods can be used to overcome the limitations of both quantitative and qualitative research, have greater explanatory power than just one method, offer both breadth and depth of insight, and has the potential to reveal paradoxes and contradictions in the data to enhance understanding of the surveyed population. A reflexive approach using a feedback loop simultaneously allows for data collection on a particular topic whilst refining theory. On the other hand, mixed methods are resource intensive, require greater expertise on behalf of the researcher, and it can be argued, carry greater subjectivity than data from one method and one research paradigm (positivistic or interpretive).

The results from this study affirm the value of mixed method research and the pragmatist paradigm, particularly for social science management studies where the interest is often in the practical consequences of data, beliefs, behaviours and actions, and opportunities to improve practice (Bryman, 2006; Bazeley, 2019). Indeed, it is difficult to envision preferencing a single research method for a study on risk attitudes (for reasons other than time or cost), even if the outputs were paradoxical or contradictory and required explanation. This is because a single research method would either call the broader applicability of the results into question (in the case of solely qualitative research), or call the practical and tangible implications of the results into question (in the case of solely quantitative research).

However, there are some disadvantages to utilising a mixed method approach with a pragmatist paradigm. Crucially, the researcher must explore and explain potential disparity between the different sources of data. If the researcher is not prepared and willing to do this or does not have sufficient resource and bandwidth, then the survey results could become confusing and of limited value. This study produced different depictions of NDIT thought-styles across the quantitative survey and the qualitative feedback (as shown in table 6.2). This outcome has emphasised the need for qualitative outputs to be carefully evaluated, considering researcher bias and the biases and motives of survey participants.

Where multiple sources of data are collected as part of mixed method studies, it appears beneficial prioritise one of the data sources as the ‘primary’ or prioritised source of data, against which other types of data is triangulated in an explanatory or exploratory manner. For this study the Group and Grid questions (part 1 of the survey) were prioritised due to their proximity to Douglasian theory. This meant that they could be used as the ‘primary’ indicator of NDIT thought-styles, against which the outputs from

part 2 and part 3 of the survey could be contrasted and explored. This has provided a stronger premise for the discussion Chapter 5 where the NDIT thought-styles as four distinct risk cultures were discussed and contrasted with reference to the risk statements and qualitative sentiment and language. By selecting a primary or 'prioritised' source of data in a mixed method study, the impact of potentially contradictory outputs from multiple sources is somewhat mitigated.

6.7 Conclusion

To conclude, it is argued that the research design for this study has been successful in capturing the NDIT thought-styles and enabling analysis of risk cultures within the UK Insurer, therefore meeting the research aim. Together, the quantitative and qualitative elements of the research has produced a broad analysis of the UK Insurer whilst providing clarity on how each of the four thought-styles think about risk. The methodology incorporated three methods of data collection to determine thought-styles, and some differences in the results obtained by each method are evident. Whilst acknowledging that all research methods have issues, it is argued that for NDIT research the Group and Grid survey questions are the most reliable method of deriving NDIT thought-styles. This is because these questions align most closely to the elementary forms within Douglasian literature, and the other two methodologies (selected risk statements and qualitative feedback) are more open to social desirability bias, informant bias, and emotional impetus on behalf of the respondent, and subjective interpretation on behalf of the researcher. However, opportunities have been identified for future research to revisit the Group and Grid survey questions to ensure that they most accurately reflect the Douglasian concepts and ascertain whether it is possible to improve the internal validity (Cronbach alpha score) across the two sets of questions.

Mixed method research has been identified by NDIT scholars as a way of overcoming the limitations presented by single-method NDIT research ; Swedlow and Johnson, 2021) though NDIT mixed method studies are rare. Indeed, it is argued that mixed method approach has provided insight into risk culture and NDIT theory that would not have been possible if just the quantitative survey questions or the qualitative question had been used. This is because the quantitative survey questions provide a view of NDIT thought-styles in the UK Insurer, but the qualitative feedback provides insight into the impact of the thought-styles on the organisation, and has developed the understanding of how each thought-style thinks about risk. Further, it proposed that mixed method approaches combining quantitative and qualitative data is necessary to understand the normative implications of the thought-styles and how they influence social relations, which is of particular interest for many types of management research. Like all research methods, there are potential disadvantages associated with mixed method approaches namely

that the outputs do not align or they contain contradictory or paradoxical information. It is recommended that the researcher prioritises one source of information as 'primary' (as this study did for the Group and Grid questions), or be willing to explain any disparity. However, it can be argued that a willingness on behalf of the researcher to gather multiple types of data and triangulate them provides a more nuanced view of thought-styles in the organisational setting being studied.

Consideration has been given to why NDIT mixed method studies are relatively rare. In addition to potential resource and time constraints, it is argued that the research methodology selected for NDIT studies tends to reflect two factors – the aims of the study (such as measuring worldviews across a population) the researcher's interpretation of Douglas' theory. Consequently, there is a risk that NDIT studies that gather both quantitative and qualitative data produce conflicting portrayals of the surveyed population, which undermines some of the researcher's theoretical assumptions. This may be why NDIT mixed method studies are rare. However, this study into thought-styles in a FS firm has compared the quantitative and qualitative outputs, and in developing observations on both NDIT research methodology and theory, has discussed the disparity in its outputs.

Future studies using NDIT could strengthen the application of mixed methods by extending the qualitative data gathering phases to further assess the impact of thought-styles on the organisation. For example, the researcher could conduct focus groups of employees across the thought-styles to debate specific issues and determine points of alignment and conflict, which would further expand the understanding of how each thought-style approaches risk-taking within a defined practical scenario. Alternatively, a case study review of strategic programme execution or risk mitigation strategies could also determine how identified thought-styles influence decision-making, and how organisational change impacts thought-style mix over time. However, this would involve significantly more research resource to gather the data and interpret the results.

CHAPTER 7: Implications of this study on Douglasian theory and the study of risk culture

7.1 Introduction

This chapter assesses implications of this study and its findings for Douglasian NDIT theory, and the study of risk culture using Douglas' theories. It draws upon both the survey data and the subsequent analysis of thought-styles in the UK Insurer, as explored in chapter 5, and the research methodology employed in the study, as detailed in chapter 6.

The foundations of Douglas' work are broad and complex, as is NDIT itself. It is not possible to comment on, or evaluate, all of its foundational elements or all areas under current debate by Douglasian scholars. Therefore, this chapter focuses on implications for key foundational elements of the theory. The results of this study have reconfirmed central tenets of NDIT - in particular, the existence of four thought-styles in an organisational setting. Chapter 5 details how the thought-styles manifest as risk cultures in the UK Insurer, each possessing a distinct and nuanced perspective on how the organisation manages risk, which in the main accords with what NDIT would predict. Additionally, section 5.4 describes the way in which NDIT can be used to understand different responses to risk policy setting, decision-making, risk communication, and management of anomaly within organisations. It also argues for the centricity of the Douglasian concepts of classification and ritual in the design and implementation of ERM (Enterprise Risk Management) frameworks, arguing that ERM frameworks are typically orientated towards the Hierarchist thought-style. Consequently, the study has articulated the relevance of NDIT to the study of risk management practices and risk culture.

The results of this study also prompt review of theoretical assumptions that are fundamental to NDIT, which is the focus of this chapter. As it is not possible to critique all elements of the theory, three areas of discussion are proposed. Firstly, the study results raise questions about the nature of the Douglasian elementary forms of Group and Grid, whether these could be re-conceptualised, and whether they are wholly independent and complementary dynamics. This is the focus of section 7.1. Secondly, the survey results indicate that individuals may possess private opinions that are not necessarily aligned to their experience of Group and Grid dynamics, and this is suggested by the difference in NDIT thought-styles obtained from part 1, part 2 and part 3 of the survey. Consequently, the role of private thought and opinion as part of the NDIT framework warrants further discussion, and is the focus of section 7.2. Finally, consideration is given as to whether, as NDIT asserts, each of the four thought-styles are of equal value to an organisation as a dominant culture, and each have equal propensity to be beneficial or harmful

to an institution. This is explored in section 7.3. Each of these topics will be considered in turn, with reference back to the theoretical concepts described and assessed in Chapter 2, Literature Review.

7.2 Revisiting the NDIT concepts of Group and Grid

This study used a survey instrument to measure the NDIT dynamics of Group (social integration) and Grid (social regulation) as a means of identifying risk cultures in the UK Insurer. The results indicate there is an opportunity to revisit the concepts of Group and Grid that are central to Douglas' work. As explained in chapter 2, the development of the Group and Grid survey instrument drew on the themes of ritual and classification that run through Douglas' work, particularly in *Purity & Danger (1966), Natural Symbols* (1970), and in *Cultural Bias* (1978, 1982). Group and Grid were developed in subsequent work by Gross & Rayner (1985) and Hampton (1982). However, the nature of Group and Grid remains an area of debate for NDIT scholars, as articulated in chapter 2, section 2.3. NDIT research generally does not explicitly define or measure Group and Grid, because scholars lean towards direct identification of the NDIT thought-styles as part of quantitative or qualitative data collection (see for example, Dake (1992)). This study therefore provides valuable insights into the nature of these dynamics. Both the novel survey instrument designed as part of this study, and the data produced, will be used to revisit Group and Grid.

7.2.1 Revisiting Group

Chapter 2 (section 2.3.1) presented an overview of the Group dynamic from Douglasian literature. The Group concept emerged from Douglas' early works (*Natural Symbols* (2002) and *Cultural Bias* (1978)) and can be described as the level of group commitment and group understanding inherent in social ordering. The Group dynamic, or 'social solidarity', exists when group pressure moderates an individual's actions in relation to the whole. Two areas will be discussed further in this section with reference to the results of this study. Firstly, the nature of Group (or social integration) will be revisited with reference to the survey instruments and data outputs. Secondly, the nature of the social pressures that underpin Group in the UK Insurer, and more generally, how these can be identified as part of institutional analysis using NDIT will be considered. Explaining the source of social pressure that underpins Group is important for NDIT if it is to be accepted as a transferable model for understanding social ordering.

7.2.1.1 Group theoretical components

In this study, the survey instrument to measure Group was devised with reference to Douglasian literature, and the work of Hampton (1982) and Gross & Rayner (1985) who had proposed predicates for measuring Group, and with additional questions based on the Douglasian articulation of ritual. The aim in using these criteria was to create a survey instrument that was aligned to Douglasian theory as far as possible, and to avoid time or context-specific content to aid transferability of the instrument. The internal consistency for the Group questions was strong, returning a Cronbach's alpha score of 0.84. Prima facie, this suggests that the questions measure the same underlying latent variable. It can be inferred from the alpha score that the Group questions measured this dimension successfully and, therefore, Group as a concept is appropriately defined by the underlying predicates and questions. However, the results reveal additional insights into the nature of the Group concept. Exploratory Factor Analysis (EFA) establishes whether the survey results reflect a single, or multitude, of latent variables and the nature of these. The EFA performed across the Group questions indicated that there are two multidimensional elements, known as Components. Table 4.7.1 shows that whilst Component 1 possesses a high Eigenvalue and accounts for almost 40% of variance, the Group survey questions reflect 2 EFA Components and have, in fact, captured more than one underlying dynamic.

The component matrix loadings (table 4.7) suggest Component 1 is comprised of questions related to team inclusion and working together, and that Component 2 is comprised of questions related to penetrability of the team. i.e., the extent to which contributions from other areas are accepted. Therefore, whilst it might be assumed that the Group dynamic comprises one underlying factor (particularly given the high Cronbach alpha score), these results show that Group comprises two factors that operate independently, as evidenced by negative factor loadings between the two components (table 4.7). Component 2 (comprising 10% of variance), relating to the penetrability of teams and whether teams act on outside contributions, is the smaller of the two identified EFA Components. This suggests Component 2 is experienced less consistently as an element of Group – and to different degrees - across the UK Insurer.

The finding that Group comprises two independent EFA components is not necessarily contrary to NDIT theory. For example, NDIT theory typically expects the Enclavist thought-style, which is high-Group and low-Grid, to establish strong boundaries around their unit and resist external social influence. The Enclavists are expected to less frequently seek or accept contributions from outside of their own team or unit. Therefore, the independence of Component 2 in the EFA analysis potentially reflects Enclavist

ordering within the UK Insurer, which comprises c.22% of the total surveyed population. It further reflects that high-Group institutional environments often comprise social solidarities that are small and locally cooperative (as in typical Enclavist ordering), rather than inclusive of multiple diverse groups of people, which is as NDIT would expect.

7.2.1.2 Source of Group Qualitative social pressure

Consideration is now given to the nature of the social pressures that enable and sustain high levels of social integration. A causal explanation is required about the origin of social pressures that sustain high levels of social integration and the Group dynamic, including those identified at the UK Insurer. NDIT theory predicts that the source of social pressures vary by context and institution – and therefore, the qualitative social pressures that sustain the Group dynamic are not part of the transferable NDIT framework. In *Cultural Bias* (1982) Douglas proposes a number of 'cosmological schemes' that are present in social contexts, suggesting that these could represent shared values that sustain group pressures, thereby informing their qualitative nature. Douglas refers to a wide range of examples including attitudes towards nature, foreign travel, use of domestic spaces, justice and the passage of time (Barker and Douglas, 1984).

Whilst NDIT theory does not state all potential sources of social pressures, or how these should be identified, this study provides some suggestions of the types of social pressures that manifest within organisations like the UK Insurer. In identifying the qualitative nature of social pressures, consideration should be given to the values and concerns that survey participants articulate in the qualitative feedback. The comments from high-Group thought-styles (Enclavist and Hierarchist) provide some insight on this. Whilst the Enclavist and Hierarchist comments contain varied sentiment, the coding in table 4.31 reveals several areas of common values and concern. The comments from Enclavists at the UK Insurer suggest that this group of people place value in equity of effort and allocation of resource amongst all, and a general concern about protecting the Insurer's customers from harm. Hierarchists appear to place most value in being organised, logical and purposeful to avoid failure. Considered together the Enclavist and Hierarchist coded sentiments reveal that high levels of social integration – or Group - appears to be sustained through values and concerns that derive from the respective thought-styles: appearing 'rational' and organised (Hierarchist), and / or a concern for ethical business practices and protecting the end customer (Enclavist). These underlying values and concerns could help explain how social integration (and the Group dynamic) is sustained and proliferated within teams in the UK Insurer – and why individuals from high-Group thought-styles are motivated to work in an inclusive and cooperative manner.

To conclude, it can be argued that shared values and concerns inform qualitative pressures that underpin the Group dynamic and actively sustain it across organisations. The results of this study have enabled the types of 'cosmological schemes' that Douglas identified in Cultural Bias (1982) to be expanded upon, by analysing attitudes and shared values within firms across organisational populations that have been identified as high-Group. However, whether the same values and concerns would be present in other FS firms, or whether these common values and concerns are unique to each organisation, remains open to further research.

The idea that shared values can create and sustain a collective consciousness is aligned to the FS Regulators' assertion in the 2020 Financial Conduct Authority (FCA) publication DP 20/21 *Transforming culture in financial services – driving purposeful cultures.* The paper asserts that a clear organisational purpose is critical for underpinning a desirable culture, and it is one of the elements of the supervisory framework that they will apply to FS firms. It appears therefore that the FS Regulator recognises the importance of a strong purpose and values in sustaining an organisation that is socially integrated, i.e. internally inclusive and cooperative. It can also be inferred that the FS Regulator would regard an absence of clear purpose and a cooperative and inclusive culture (akin to a low-Group environment) as detrimental to organisational culture. However, the Regulator may concede that that lower levels of Group will be experienced in some parts of the organisation in accordance with the NDIT model.

The next section turns to a review of the Grid dimension, using the results of this study to further refine it as a concept, including how it can be considered different to Group.

7.2.2 Revisiting Grid

Chapter 2 (section 2.3.2) described the concept of Grid (social regulation) as discussed within Douglasian literature. This includes how the definition has evolved over time, supported by Douglasian scholars such as Rayner and Thompson, and critiques from, for example, Spickard (1989). Whilst the definition remains open to debate, there is a consensus that Grid can be understood as a series of regulations that limit personal and social choice which are then reinforced via social activity. Grid also assigns ascribed hierarchies whilst socially differentiating individuals and groups. Douglas acknowledged the complexity of the Grid concept, and writings on Grid including *Cultural Bias* (1982) and *The Background of the Grid Dimension: A Comment* (1989) further underline the difficulty of creating an all-purpose definition of Grid (see also, for example, Barker and Douglas, 1984) (Douglas, 1989). This section evaluates the nature of Grid as reflected in the survey results, initially comprising a discussion of concepts that can be

considered integral to Grid. It also furthers discussions from chapter 4 (section 4.3) on whether or not Grid should be reconceptualised as a multidimensional concept.

It is proposed in Chapter 2 that Grid may be the more ambiguous and multifaceted of the two social dynamics, and this is confirmed by the results of this study. The complexity of Grid is reflected in the Cronbach alpha internal consistency score of 0.423, which does not meet traditional levels of acceptability (>0.7) for consistency. It may be that an alternative set of Grid questions, either these questions re-worded or other questions based on an alternative interpretation of Grid, could produce a higher internal consistency score. This could be established through future studies using a wider set of Grid questions to test inter-item question relationships for statistical consistency.

Nonetheless, the results of this study provide insight into the nature of Grid. Chapter 6 evaluates the methodology of this study, and in section 6.3.2 it is suggested that the concept of Grid is most closely aligned to six of the eleven questions because they possess a moderately strong statistical relationship to each other:

- *Q12: My grade / seniority and role in the company determines how I should act*
- *Q13: I change my approach to dealing with people depending on whether they are more senior or junior than me*
- *Q14: I have a highly defined role with a very distinct set of responsibilities*
- *Q16: I tend to work within the boundaries of my role*
- *Q20: I stick to processes, procedures and standards in the way I perform my role*
- *Q21: In my team, if processes, procedures or standards are not adhered to, action will be taken to find out why*

The Grid questions were derived for this study using concepts or 'predicates' from Douglasian literature (drawing on Hampton, 1982, and Gross & Rayner, 1985, in addition to the Douglasian concepts of classification and ritual), and therefore it was not known whether the six questions above would accurately reflect the concept of Grid or return high correlation to each other. The results show moderately strong statistical relationships between the six questions above. Additionally, there are close theoretical correlations between these questions and Douglasian theory. Whilst it is maintained that the concept of Grid is the more complex of the two NDIT dynamics, and will remain open to debate, it is argued that the six questions above reflect concepts that appear integral to Grid. Taking each question in turn, it is possible to see how these relate back to Douglasian literature and how they can be judged as core to the theoretical Grid dimension. This is the focus of the following paragraphs.

Questions 12 and 13 were derived from Gross & Rayner (1985) and the concept of Accountability. Accountability is described as the amount of member interactions in which one is dominant and the other subordinate. Strong or weak levels of status or ranking is associated with high or low-Grid environments and is aligned to the dynamic model of NDIT set out by Thompson (1980, 1982) which regarded high-Grid environments as those where the position of individuals is ascribed rather than negotiated (Douglas, 1989). Linked to the concept of non-negotiated roles is the concept of role Specialisation, which is also borrowed from Gross & Rayner (1985), and forms the basis of Q14. Specialisation relates to the number of possible roles that an individual assumes within a time frame – and in the context of the UK Insurer, relates to the strict definition of their job description at work. The results of this study emphasise that in a high-Grid environment an individual is expected to fulfil certain responsibilities and duties and not others, and in a low-Grid environment individuals may have more freedom to choose. The results also emphasise the centricity of organisational hierarchy – i.e. seniority – to the concept of Grid. This explains why junior staff in the UK Insurer are more likely to experience Grid as their roles are likely to be restricted and defined to specific operational tasks. However, this aspect of Grid could expand to other societal or domestic settings where individuals have specific ascribed responsibilities.

Next, Q16 relates to the concept of Insulation (Hampton 1982) and concerns the propensity of an individual to limit their activities to well-defined areas. This expands on the concept of Specialisation (as proposed by Gross & Rayner) to encompass the level of autonomy individuals have to operate outside of ascribed roles and activities. Douglas notes that, in practice, it is not always the case that more autonomy means less structure, for it may be possible for individuals to re-negotiate which ascribed role they perform (Douglas, 1989). However, the strong inter-item relationship between Q14 and Q16 appears to show that there is less autonomy afforded to individuals in the UK Insurer to operate outside of ascribed roles when working in a high-Grid environment. The results of this study emphasise that in a high-Grid environment individuals are expected to limit their activities to defined areas that are part of an ascribed role, and have limited opportunity to negotiate the activities they are expected to undertake.

Finally, questions 20 and 21 relate to the concept of classification that is inherent to Douglasian literature and the NDIT model. As explained in Chapter 2, the concept of Grid was positioned in Douglas' early work (*Natural Symbols*, 2002) as shared / public systems of classification (fig 2.1). Therefore, it can be assumed that the presence of classificatory boundaries is integral to a high-Grid environment. Questions 20 and 21 reveal whether individuals are expected to perform tasks in a pre-established and rules-based manner, and whether breaches of these (classificatory) boundaries are noticed or acted upon. The centricity of classificatory boundaries and whether they can be negotiated emphasises that social

organisation for Douglas is underpinned by the ways people classify their problems, resources and relationships, as argued by 6 and Richards (2017). The concept of classification presents an inherent property of Grid which is also demonstrated by the discussion in Chapter 5 of the different responses of the four risk cultures to the Enterprise Risk Management (ERM) frameworks. It is argued that ERM frameworks are essentially Hierarchist (high-Grid and high-Group) in nature, and represent a system of classification (with the aim of understanding and ordering risk-taking) that is underpinned by ritual activity. Therefore, it will be met with some resistance from low-Grid cultures and tolerated by Isolates. The low-Grid risk cultures (Enclavism and Individualism), in particular, articulated frustration towards the bureaucracy and complexity associated with the UK Insurer's risk management methodology, which is as NDIT would predict. The results of this study emphasise, therefore, that alignment to established classificatory boundaries (such as rules and procedures) is integral to the presence of Grid, as is the likelihood that action will be taken if they are not observed.

Whilst the nature of Grid remains open to debate, it is argued that there are some fundamental aspects that align with Douglasian literature and are supported by the results of this study. To summarise and to illustrate the nature of Grid further: an individual within a high-Grid environment in the UK Insurer will perform an ascribed role as part of a system of hierarchy, and will interact with others in accordance with their hierarchical position. The individual will assume specific responsibilities which they are expected to observe, and accept pre-defined methods and boundaries for performing these responsibilities, whilst expecting deviations to these methods or boundaries to be noted and acted on. Whilst other potential elements of Grid could be represented by the other five Grid questions in the survey instrument, the results suggest these are less integral to the Grid dynamic. Alternatively, the questions would benefit from revision (as discussed in section 6.3.2) to improve cohesiveness with the six described in this section.

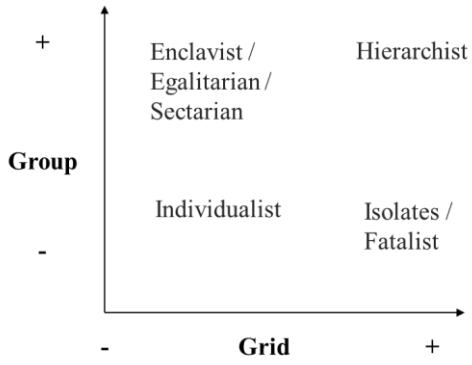
Additionally, the results suggest that individuals have the potential to experience – and report – high-Grid environments differently. This seems to distinguish Grid from the Group dimension, because the surveyed population report social integration in highly consistent ways, as discussed in section 7.2.1. The results in Chapter 4 suggest that not all respondents experience Grid in the same way. This is indicated by the multiple EFA factors in table 4.7, a lower number of inter-item correlations and negative factor loadings across the Grid questions (table 4.11). This outcome is perhaps one that Douglas might expect, as individuals in differently ranked or differently classified positions in strong social regulation may not have a common recognition of the nature of that ordering (6, 2021). This has implications for whether Grid should be re-conceptualised as multidimensional owing to its complexity and the lower internal

consistency scores obtained in this study. It was argued in Chapters 4 and 6 that there is insufficient evidence from this study alone to assert that Grid is multidimensional and compromise the coherence and parsimony of the NDIT model of two unidimensional dynamics (Group and Grid). This judgement is further supported if it is accepted that Grid is experienced and reported differently, and it means that the Grid questions may not always return high traditional measures of statistical consistency (such as Cronbach alpha) in quantitative studies. It is, therefore, proposed that Grid should be considered a unidimensional phenomenon as part of the NDIT model, as it is currently. This is because the results of this study suggest that the properties of social regulation are interlinked but multiple, may vary across organisational contexts, and be experienced and reported differently, but it does not necessarily follow from this that Grid is a multidimensional concept. Therefore, these aspects appear to distinguish Grid from the Group dimension in the NDIT model.

7.2.4 Revisiting Group and Grid relationship

This section discusses the relationship between the Group and Grid dynamics and whether, as the NDIT model would assert, they are wholly independent and complementary institutional forces. The NDIT model maintains that Group and Grid are distinct, and Douglas' two-dimensional model can be represented by a 2x2 matrix - which to restate, is depicted in fig 7.1 below (author's own depiction).

Fig 7.1



Douglas' two-dimensional model infers that Group and Grid are wholly independent and complementary. Furthermore, this is required for the resultant distinct thought-styles to emerge, because each of the four thought-styles are either high or low-Group and high or low-Grid. It should be theoretically possible for

individuals to occupy a position on the Grid axis that is completely uninfluenced by their position on the Group axis, and vice versa.

However, the results of this study indicate statistically that there are possibly relationships between the Group and Grid questions, which is contrary to what should be expected of the NDIT model, as depicted above. An association test was performed across the quantitative survey results to assess the relationship between all survey questions. This is shown in table 7.1 below. Pearson's r correlation coefficients were used evaluate bivariate relationships between different survey questions, alongside their p-values. The Pearson's r correlation coefficient shows the linear relationship strength between two variables, but does not imply causation from one variable to another (Ratner, 2009). The corresponding p-values show the statistical significance of the relationship and the probability that the relationship between the two variables is equal to zero (Andrade, 2019). Values between 0 and 0.3 (0 and -0.3) indicate a weak positive (negative) linear relationship and values between 0.3 and 0.7 (0.3 and -0.7) indicate a moderate positive (negative) linear relationship.

Table 7.1: Group & Grid question Pearson Correlation

As a reminder, Q1-11 are Group questions and Q21-22 are Grid questions.

Pearson Correlations		Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21	Q22
Q12	Pearson's r	0.013	0.009	-0.026	0.018	0.006	-0.053	-0.046	0.008	0.052	0.006	-0.021	—										
	p-value	0.762	0.829	0.544	0.670	0.897	0.223	0.289	0.855	0.228	0.893	0.628	—										
Q13	Pearson's r	0.034	0.056	0.006	-0.018	-0.003	0.009	-0.048	0.075	0.057	0.004	0.012	0.265***	—									
	p-value	0.437	0.198	0.890	0.681	0.943	0.829	0.271	0.082	0.188	0.925	0.780	< .001	—									
Q14	Pearson's r	0.177***	0.106*	0.071	0.174***	0.109*	0.140**	0.164***	0.071	0.084	0.266***	0.202***	0.082	-0.089*	—								
	p-value	< .001	0.014	0.099	< .001	0.012	0.001	< .001	0.101	0.051	< .001	< .001	0.057	0.039	—								
Q15	Pearson's r	0.083	0.124**	0.102*	0.032	0.055	0.121**	0.049	0.210***	0.019	0.144***	0.224***	0.051	0.027	0.054	—							
	p-value	0.055	0.004	0.018	0.457	0.201	0.005	0.257	< .001	0.662	< .001	< .001	0.241	0.534	0.213	—							
Q16	Pearson's r	0.042	-0.012	-0.056	-0.043	0.031	-0.049	-0.061	-0.066	-0.074	0.054	0.023	0.086*	0.060	0.243***	0.054	—						
	p-value	0.331	0.778	0.193	0.320	0.469	0.254	0.159	0.127	0.087	0.213	0.589	0.045	0.167	< .001	0.210	—						
Q17	Pearson's r	-0.160***	-0.156***	-0.105*	-0.034	-0.105*	-0.166***	-0.143***	-0.132**	-0.121**	-0.237***	-0.205***	0.140**	0.123**	-0.013	-0.121**	0.140**	—					
	p-value	< .001	< .001	0.015	0.429	0.014	< .001	< .001	0.002	0.005	< .001	< .001	0.001	0.004	0.759	0.005	0.001	—					
Q18	Pearson's r	-0.141**	-0.154***	-0.145***	-0.111*	-0.129**	-0.244***	-0.132**	-0.131**	-0.155***	-0.175***	-0.114**	0.146***	0.102*	-0.065	-0.040	0.094*	0.112**	—				
	p-value	0.001	< .001	< .001	0.010	0.003	< .001	0.002	0.002	< .001	< .001	0.008	< .001	0.019	0.133	0.357	0.029	0.009	—				
Q19	Pearson's r	-0.025	-0.021	-0.008	-0.057	-0.033	-0.084	-0.043	-0.020	0.044	-0.101*	-0.063	0.046	0.108*	-0.150***	-0.004	-0.100*	0.087*	0.120**	—			
	p-value	0.570	0.631	0.848	0.184	0.450	0.050	0.321	0.638	0.309	0.020	0.142	0.284	0.012	< .001	0.928	0.021	0.045	0.006	—			
Q20	Pearson's r	0.123**	0.101*	0.059	-0.008	0.004	0.123**	0.007	0.093*	0.065	0.040	0.092*	0.042	0.029	0.277***	0.065	0.263***	0.095*	0.073	-0.037	—		
	p-value	0.004	0.020	0.171	0.858	0.933	0.004	0.869	0.032	0.135	0.350	0.033	0.326	0.505	< .001	0.134	< .001	0.027	0.092	0.391	—		
Q21	Pearson's r	0.231***	0.164***	0.146***	0.190***	0.267***	0.264***	0.229***	0.201***	0.199***	0.323***	0.275***	0.051	0.005	0.265***	0.134**	0.085*	-0.115**	-0.049	-0.113**	0.292***	—	
	p-value	< .001	< .001	< .001	< .001	< .001	< .001	< .001	< .001	< .001	< .001	< .001	0.238	0.913	< .001	0.002	0.049	0.008	0.254	0.009	< .001	—	
Q22	Pearson's r	-0.123**	-0.076	-0.186***	-0.033	-0.103*	-0.133**	-0.143***	-0.155***	-0.060	-0.091*	-0.140**	0.056	0.045	0.049	-0.041	0.024	0.128**	0.082	0.125**	0.052	-0.043	—
	p-value	0.004	0.079	< .001	0.440	0.017	0.002	< .001	< .001	0.164	0.035	0.001	0.198	0.304	0.256	0.345	0.586	0.003	0.058	0.004	0.231	0.326	—

* p < .05, ** p < .01, *** p < .001

The theory would predict that there should be no relationship between questions 1-11 and questions 12-22. However, the correlation analysis shows that, unexpectedly, six of Grid questions display slight to moderate (up to Pearsons r 0.323) correlations to the Group questions. Three questions show positive correlations and three questions negative correlations. Whilst it is not possible to conclude that a causal relationship exists, it is unclear why there are small statistical correlations between Group and Grid questions at all. Consideration could be given to the revising and further testing the survey questions to ensure they capture wholly distinct institutional forces. However, it is possible that a relationship exists between Group and Grid and this is now explored in more detail, including what this might mean for NDIT theory.

Table 7.1 shows that there are three Grid questions that may have a consistent (albeit weak/moderate) relationship with the Group questions. The most notable positive relationship between a Grid question and Group questions relates to Grid question Q21: *In my team, if processes, procedures or standards are not adhered to, action will be taken to find out why*. This has a statistically significant correlation p-value of <.001 with each of the Group questions and is most highly correlated (0.323) with Group question Q10: *Where I work, there is a strong sense of what the team stands for*. Q21 was designed to assess whether deviations to prescribed rules and procedures (classificatory boundaries) results in corrective action. The correlation between this question and Group questions could possibly suggest that individuals in the UK Insurer may be more likely to experience corrective action where they are working in a high-Group environment. It may be that public or 'shared' types of classification, like company processes, procedures and standards, are somewhat reliant on the presence of Group to manifest, as well as being an indicator of the Grid dynamic. If a high-Grid environment is considered to contain (amongst other attributes) robust shared systems of classification, as NDIT theory would suggest, there appears to be an accompanying reliance on social awareness and acceptance of these. This might explain why there is a relationship between Q21 on managing anomalous behaviours and the Group questions. Furthermore, in a business such as the UK Insurer, it is more difficult to imagine examples of social regulation, such as processes and procedures, without some social integration being necessary for individuals to accept them. Studies in other organisations such as governmental bodies or societal groups might present examples where individuals are socially regulated in a way that does not necessitate any form of social integration, as the NDIT model suggests is possible, but this remains to be established.

There are two other Grid questions that have a slight positive but statistically significant relationship with five Group questions – Q14 and Q15. Q14: *I have a highly defined role with a very distinct set of responsibilities* relates to Grid concept of role specialisation (borrowed from Gross & Rayner, 1985). It

may be that a degree of social integration (Group) is required for role speciality to be created and recognised by others in the social setting, and therefore role specialisation may not be wholly independent of social integration. Grid question Q15: *Getting input from the right experts or specialists is vital for achieving company goals* also has slight positive but statistically significant relationships with five Group questions. It is possible that seeking input from others could represent both social regulation (Grid) in the sense of valuing expert opinion, as well as social integration (Group) by seeking the counsel of others. Again, it seems as though some of the Grid concepts may require some degree of social integration (Group) to enable social awareness and acceptance of them, and allow them to exist in the organisation.

Additionally, three Grid questions show a slight negative correlation with the Group questions – Q17, Q18 and Q22. Q17 and Q18 relate to timing and formality of performance feedback and taking direction from senior management, and Q22 relates to the segregation of office space to individuals in specific or more senior roles. The results imply that where the Group dynamic is more present, these elements of the Grid dynamic are less likely to manifest. Whilst these questions reflect Grid predicates, it is possible that the level of social integration influences the degree to which individuals receive formal feedback, ongoing informal feedback, take orders from senior management, and work within segregated office space.

To summarise, that six of the Grid questions show a consistent, albeit slight, correlation to the Group questions is worthy of consideration from a theoretical perspective. The results suggest that whilst NDIT theory conceptualises Group and Grid as distinct and wholly independent dynamics these may not materialise completely independently in certain contexts, including at the UK Insurer. Individuals in a large organisation like the UK Insurer are seemingly reliant on a level of social integration, to participate or reject in types of social regulation (for example, formal or informal restriction of office spaces, understanding and working within the boundaries of a role, taking direction from seniors). Therefore, conceiving of social regulation (Grid) with the complete absence of social integration (Group) in a highly organised and coordinated institution like a FS firm is difficult. A potential relationship between some elements of Grid and the Group dynamic makes conceiving and capturing the Grid dynamic as a wholly independent and coherent phenomenon even more challenging.

In addition to revisiting the concepts of Group and Grid and the relationship between the two dynamics, there is an opportunity assess the significance of individual agency in the NDIT model. The next section will evaluate whether the results of this study further inform how individual agency and personal opinion should be understood in NDIT.

7.4 Revisiting Individual Agency in NDIT

As argued in Chapter 2, an area for further exploration in NDIT is the relationship between collective thought-styles (or risk cultures) and individual agency. Whilst sociologists continue to debate the nature of agency, it can be described as encompassing self-hood, motivation, will, purposefulness, choice and freedom (Emirbayer and Mische, 1998). There is a tension between the concept of individual agency and the Douglasian NDIT model for understanding culture – in particular, to what extent individuals possess agency and the nature of agency as part of each of the four thought-styles. Understanding the nature of agency in the NDIT model is required to explain how individuals navigate groups or instigate change, as this would not be possible if agency is not present in the NDIT model at all. The degree to which agency and personal thought influences institutional behaviour in the NDIT model or are usurped by collective mindsets also remains open to discussion. This section evaluates how agency is represented in Douglasian literature and argues that the results of this study are not fully explained by Douglas' theories of agency in the NDIT model.

As outlined in section 2.5.4, Douglas acknowledges throughout her work that agency and personal views exist alongside the NDIT model. In *Natural Symbols* agency is termed 'private thought' (Douglas, 2002, pg.65), though Douglas asserts in *Natural Symbols* that a solitary state is required for an individual to develop a privately articulated philosophy, and that this would not be possible alongside strong social pressure (Douglas, 2002). This appears to be a significant assumption in the development of NDIT theory which is subsequently revisited. In later works Douglas attempts to further reconcile agency and the role of the individual into the NDIT model. It is suggested in *How Institutions Think (*1986) that institutions inform 'important decisions' whilst individuals engage in tactics and details, thereby acknowledging that a degree of individual agency exists alongside institutional forces. Douglas comprehensively and explicitly addresses the role of agency within NDIT in *Missing Persons* (1998) where the 'position of ego' is described and discussed as part of each of the four thought-styles. Douglas proposes that the position of the ego is defined by the NDIT thought-style surrounding the individual – for example, the ego within an Enclavist thought-style is somewhat constrained by strong group pressures, the ego is in need of structure as part of the Hierarchist thought-style, the ego is necessarily unpredictable as part of the Isolate thought-style, and the ego is robust and resilient as part of an Individualist thought-style (Douglas, 1998, pg.108). The level and type of agency, it is argued, depends on the surrounding thought-style. It is also stated specific personalities can be drawn to one of the four thought-styles and create allegiances accordingly: 'persons trained in hierarchical assumptions would tend to seek their most congenial and familiar social environment…' (Douglas, 1998, pg. 107). Overall, Douglas' understanding of individual

agency and 'private thought' appears to be that they are materially influenced by the NDIT thought-styles and what sort of agency is permissible within each context.

This section will review the results of the study, and then evaluate to what extent the results align to Douglas' proposals on individual agency within the NDIT model. The results in chapter 4 reveal that it is possible for individuals to belong to an NDIT thought-style (as measured by Group and Grid dynamic questions in part 1 of the survey) but espouse opinions, via the anonymous survey feedback, that contrasts to what might typically be expected of the thought-style. This is most pronounced in the data in table 7.3 below, showing the coded qualitative comments from part 3 of the survey cross-tabulated with the Group and Grid-derived thought-style derived from part 1 of the survey. Overall, there is only a moderate correlation between the NDIT thought-style and the coded qualitative sentiment expressed by the respondent. Most notable is the total number of qualitative comments that are coded as Individualist (36%), when the dominant thought-style in the UK Insurer is Hierarchism (according to part 1 of the survey that measures the organisational dynamics of Group and Grid). Furthermore, over half (53%) of Isolates responded with a comment that is Individualist in nature. Table 7.3 also shows that a proportion of individuals express views on risk management that are at odds with views typical of the NDIT thought-style that they belong to – for example just 38% of Hierarchists returned a comment that could, on face value, be deemed Hierarchist in sentiment. It appears therefore whilst behaviours of individuals and their way of organising in the UK Insurer are influenced by Group and Grid, they may possess personal views that do not always align with their way of organising.

Table 7.3

	Qualitative Comment-derived thought-style			
Group and Grid-derived thought-style	**Enclave**	**Isolate**	**Hierarchist**	**Individualist**
Enclave	33%	0%	29%	38%
Isolate	12%	12%	24%	53%
Hierarchist	24%	9%	38%	29%
Individualist	33%	0%	33%	33%
Total	25%	7%	33%	36%

It is also worth considering the alignment of the NDIT thought-styles (part 1 of the survey) and the selected risk statements (part 2 of the survey), as highlighted in table 7.4 below. This is further evidence that individuals can possess differing personal views to those that are typically attributable to the NDIT thought-style that they belong to.

Table 7.4

	Selected Risk Statement			
Group and Grid-derived Worldview	**Enclave**	**Isolate**	**Hierarchist**	**Individualist**
Enclave	28%	7%	36%	30%
Isolate	24%	3%	44%	28%
Hierarchist	30%	7%	47%	16%
Individualist	22%	14%	42%	22%
Total	%	%	%	%

It is not clear how to interpret the disparity between the personal views articulated in parts 2 and 3 of the survey and the NDIT thought-styles derived from part 1 of the survey, since Douglas does not explicitly describe how personal views that do not align to an individual's NDIT thought-style should be accounted for. Douglas does acknowledge that psychological commitment is not necessarily present in the context of social ordering and ritual activities ("*hasn't anyone ever been bored in church?"* (M. T. Douglas, 1986, pg.34)) giving rise to 'empty' ritual activities. However, the causes of misalignment of personal views and those typically attributed to each thought-style remain open to debate.

It is possible that the difference between personal views and thought-style is indicative of dissatisfaction from groups of individuals in the UK Insurer and is a precursor to a change in the thought-style mix, where individuals divert to another NDIT thought-style. Douglas would expect the thought-style mix to change over time, as people become sufficiently dissatisfied, given that NDIT is a dynamic and reflexive model. As argued in section 5.4.2, the apparent commitment to following Hierarchical protocols (such as the Enterprise Risk Management framework) appears to be fragile and is often met with criticism from the surveyed population, which it is argued emphasises the vulnerability of the dominant culture to change. However, a longitudinal study is required to assess whether divergent personal views are the precursor to a change in an organisation's thought-style mix, or, whether individuals are comfortable operating in a manner that is at odds with their personal views but aligned to a particular NDIT thought-style. To summarise, the significance of personal views in the NDIT model is not clear from these results or Douglas' explanations, but could form the basis of additional longitudinal and qualitative research. Additionally, chapter 6 argues that psycho-social bias may be a factor influencing the qualitative comments and the selected risk statements, meaning there is a difference between how individuals operate and what they think about how they are required to operate in the UK Insurer. This suggests that social pressures other than the NDIT Group and Grid dynamics (such as psycho-social bias) have the potential to influence individual perceptions and views, and are not accounted for in the NDIT model.

It is now possible to assess Douglas' proposal that the NDIT thought-styles inform the 'styles of agency' present in each of the four cultures (rather than the type of sentiment they espouse), which is the focus of *Missing Persons* (1998). Douglas argues that a particular style of agency, i.e. ways of deciding, choosing and acting, is derived from the position of ego in each of the four thought-styles, as explained above. The results of this study provide some, albeit limited, insight into the styles of agency exercised by each NDIT thought-style because it is not obvious from the data collected how individuals practically exercise their agency, and therefore how their agency could be described. However, tables 7.3 and 7.4 show that each thought-style has propensity to articulate an opinion or select a risk statement that diverges from the NDIT thought-style. This potentially means that each thought-style has the potential motivation towards choices and decisions that are not typical of the NDIT thought-style. Tables 7.3 and 7.4 show that Isolates most frequently returned comments and selected risk statements that did not align to their NDIT thought-style, indicating that their espoused views are most frequently at odds with their experiences of Group and Grid. This might reveal something about the suppression of agency and personal choice within the Isolate culture, which is as Douglas would predict.

In summary, it is argued that the significance of agency and personal views in the NDIT model remains open to further research and discussion. The qualitative comments show that it is possible for individuals to possess personal views that do not align with their experience of Group and Grid, which raises questions about the impact of these on culture in both the short term, and as part of dynamic long-term change. It is evident also that not all personal views and beliefs can be predicted by the NDIT model. This means that changes to the culture of an organisation over time may not be wholly predicted or explained by NDIT. Douglas' theory that NDIT thought-styles influence permissible styles of agency remains plausible but are not fully substantiated in this study due to the nature of the data collected. It remains possible that different 'styles of agency' are permissible within each NDIT thought-style, and this could be the focus of qualitative longitudinal studies that assess the impact of individual agency within a particular NDIT thought-style on organisational decision-making, for example through document review of decision-making or case study analysis. However, the results of this study reveal that each thought-style has a propensity towards choices and decisions that may not always align to their NDIT thought-style, suggesting that the level of agency afforded to each thought-style may not vary as much as Douglas predicts in *Missing Persons* (1998) where it is stated that styles of agency are linked to each thought-style.

7.5 The neutrality of NDIT thought-styles

This section considers the usage of NDIT as a method of comparative analysis of societies and institutions, and specifically whether it is always possible, as Douglas intended, to remain agnostic (neutral) about the thought-styles that it depicts. In this section it is argued that there are some distinct advantages associated with an institution possessing a dominant thought-style of Hierarchism, a view that was shared by Douglas, and that there are specific advantages for FS organisations of this thought-style.

Douglas' aim for NDIT was a framework for cultural comparison, moving away from sociological and anthropological observations from those that are subjective and relative ('…being surprised that Frenchmen talk French…' (Douglas 2002, p.xi), and enable meaningful comparison and analysis across environments. As an explanatory tool for organisational and social interaction, it is inherently agnostic about the value that is placed on each thought-style and the appropriateness of a particular cultural mix. Douglas comments in Being Fair to Hierarchists that 'Cultural theory gives no normative lessons about preferring one culture over another…' (Douglas, 2013, pg.274). Consequently, none of the four thought-styles in NDIT are considered to be more or less desirable, and none are more or less essentially rational or irrational (6, 2017). NDIT literature emphasises all thought-styles give rise to cultures that can be perceived as good, or if unmitigated and allowed to flourish to excess, can cause harm. For example, Enclavist ordering can produce both small tight-knit communities, and jihadist terrorism as Douglas and Mars (2003) outlines. Fear of loss of control associated with Hierarchism can lead to poor stakeholder relations and inertia, as Thompson argues is the case with the United Nations (Thompson, 2004), but it is also the structural force in religious institutions and family homes (Douglas, 2005). Isolate thought-styles present across unionized mill workers as Thompson argued, and have also been presented as common across public service delivery (Hood, 1998). Individualism could be considered to underpin policy decision-making preceding the 2008 financial crisis (Linsley, Shrives and McMurray, 2016), but is also an environment that allows creative artistry to thrive, as argued by Douglas in *Cultural Bias* (Barker and Douglas, 1984). Mars further argues in *Cheats At Work* (1982), each culture is liable to undertake unethical or 'fiddling' behaviour, albeit justified by each thought-style in a different way. NDIT theorists therefore assert that outcomes of a particular thought-style depend on the ideology present within the thought-style, and the personality and motivations of individuals, and not its way of organising.

Therefore, there appears to be a general acceptance across NDIT scholars that Group and Grid thought-style analysis provides a comprehensive transferable method of understanding and contextualising institutional (and by extension, individual) behaviour. For the purposes of detached anthropological

analysis of social ordering or political activity the non-judgemental application of a model such as NDIT is appropriate.

It is also possible to argue that there are normative implications associated with the presence or absence of social integration (Group) and social regulation (Grid), and when evaluating institutional culture using NDIT, and that the NDIT thought-styles are not equally desirable. This is because in certain environments, including large institutions such as the UK Insurer, a particular manner of organising appears more likely to precipitate poor business outcomes. The causes of business instability and poor outcomes (such as unprofitability and unfair treatment of stakeholders) are multiple. However, arguably these commonly derive as a result of uncontrolled risk-taking coupled with lack of authority, transparency and oversight, and fractured relationships between groups of people. This means that in practice, there could be a desirable balance of thought-styles within an organisation depending on its activities and scale, which is explored below.

Although Hierarchism possesses negative attributes, especially when it is particularly dominant and entrenched (for example, bureaucracy, inflexibility, prescriptiveness), and these can lead to the type of brittle inertia Verweij et al describes in response to global governance over climate change (Verweij, Douglas, Ellis, et al 2006), it is argued in Chapter 5 that the dominant thought-style of Hierarchism is of overall benefit to the UK Insurer because it is most suited to the organisation's goals and the expectations of its supervisory body. Chapter 5, section 5.4, argues that a Hierarchist bias within an organisation is most likely to actively encourage consistency, transparency, data-informed decisions, and ensure those with authority and experience are held accountable for their actions. The organisation is more likely to consider the long-term and systemic impacts of individual actions and take measures to predict and control risks. These outcomes are of prime interest to the UK Insurer, other FS firms and their leadership teams. A Hierarchist culture is also most likely to implement a preventative control environment (probably under the auspices of a formal ERM programme) that will limit harm and loss across key risks such as financial liquidity, conduct, financial crime – rather than just respond to losses. Whilst any risk management approach has limitations, a preventative, integrated, and well-coordinated approach is more likely to limit loss.

By contrast, under Individualism, employees are not beholden to social regulation or social integration, and therefore are less likely to act in the interests of the whole organisation, rather towards their individual or localised goals, and will tend to take a short-term perspective towards risk-taking. Where Isolates represent the dominant thought-style, the employee population may be less likely to take

proactive action to manage risks, share information, collaborate with others towards a common goal, or attempt to identify and solve organisational problems. Therefore, arguably both Individualist and Isolate thought-styles at scale seem more likely to lead to long-term harm, losses, and behaviour that could be considered harmful or unethical – for example unreported risks, uncalculated risk, uncontrolled or undetected fraudulent behaviour. Additionally, a lower level of social integration (Group) may result in a lower propensity for employees to hold each other to account for their actions, and therefore limit harm.

Therefore, whilst it is difficult to fully ascertain that FS firms will only be stable and successful with a dominant Hierarchist thought-style, it is more difficult to imagine a FS firm thriving under a predominantly Individualist, Isolate or Enclavist thought-style. Equally, the FS Regulator and FS firm stakeholders are more likely to tolerate a firm that is slow, inert or cumbersome, over one that propagates a free-market level of accountability (for example, Individualism), or does not adhere to stipulated rules and regulation (for example, Enclavist). The historic consequences of uncontrolled risk-taking in FS firms are tangible and clear; this includes the government bailout of banks in 2008/2009 that were 'too big to fail'. The rise of Individualism as a precursor to the 2008 financial crisis has been discussed by NDIT theorists (Linsley, 2017), (Linsley and Shrives, 2009). Therefore, the consequences of a particular dominant thought-style appear more to critical FS firms, than those that do not carry such a high level of inherent and systemic risk that could cause global disruption – such as retail or service organisations, or NGO's.

To summarise, it is argued that when applied to certain large institutions and sectors including a Systemically Important Financial Institution (SIFI) like the UK Insurer, there might be an optimal cultural mix and preferred dominant thought-style. In setting out this argument it is accepted that, as NDIT states, all four are necessarily present within the organisation, and all four thought-styles are detrimental in their total absence or excess. This argument does not undermine the role of NDIT as a tool for comparative cultural analysis or reduce its usefulness as a theory for stratifying or exploring risk culture. However, it is worth considering whether the purported neutrality of each thought-style may be easier to justify when NDIT is used for retrospective study of historical events, political sentiment, or the study of communities – as opposed to studies of large institutions that carry levels of risk that are significant on a global scale and could cause significant harm if unmanaged.

Douglas was aware that specific thought-styles could possibly be more desirable and better suited to certain organisations and societal outcomes. Douglas published *Feeling for Hierarchy* (2005) in which she described in detail her affinity towards Hierarchical ordering stemming from her experiences in the

family home and religious education. She specifically references Hierarchist characteristics such as the institution of authority, managed communication, respect, segregation of power, its comprehensive and universal nature and opportunities for peace and reconciliation (Douglas, 2005). By contrast, Individualism is described as competitive, unstructured and driven by power and wealth; it has a philosophy of equality and a practice of inequality (Douglas, 2005). In this paper, Douglas seems to imply that characteristics of Hierarchism may be best placed to create stability, order and cohesiveness. Douglas also emphasised the view that Hierarchism is best placed create stability and order in organisations (albeit in a potentially dysfunctional and restrictive way) in her paper *The Risks of the Risk Officer*, and claimed that Hierarchism would be the 'safest place' for an appointed Risk Officer to conduct their duties (Douglas, 2013, pg. 214). Douglas' observations on the nature of Hierarchism emphasises that in practice, some thought-styles may be more favourable in specific institutional settings than others. Furthermore, attributes she refers to with respect to Hierarchism would be well suited to the management of FS firms, as this research argues that they are.

7.6 Conclusion

This study has provided an opportunity to enhance understanding of NDIT theory in a number of key areas, namely the foundational concepts of Group and Grid, the role of private philosophy in the NDIT model and the neutrality of the four NDIT thought-styles. Whilst each of these topics warrant further discussion, the results of this study provide insight and clarity into aspects of the theory, alongside opportunities for further research to refine these further.

The approach to measurement of the NDIT thought-styles through the Douglasian concepts of Group and Grid has enabled further theoretical examination of these dynamics. The study has affirmed that of the two Douglasian concepts, Group is a more clearly defined and contained dynamic as Douglas herself identified in her work. Consideration has also been given to potential sources of group pressures that sustain the Group dynamic; these are external and not part of the transferable NDIT model but are required to sustain Group. In contrast to Group, the Grid dynamic appears complex and underpinned by multiple interlinked concepts. Whilst the nature of Grid remains open to debate, it is argued that it is most closely aligned to six of the Grid questions employed in this research, which were derived using concepts or 'predicates' from Douglasian literature (Hampton (1982) and Gross & Rayner (1985), in addition to the Douglasian concepts of classification and ritual). Additionally, the results suggest that individuals have the potential to experience – and report – high-Grid environments differently. This seems to further distinguish Grid from the Group dimension and has implications for NDIT research that aims to measure Group and Grid.

The survey data also, unexpectedly, suggests a low but consistent and statistically significant relationship between the Group and Grid dynamics. This is contrary to NDIT theory which asserts that Group and Grid are wholly independent of each other. The correlations between elements of Group and Grid may mean that they are not wholly distinct social forces, and, in a large institution like the UK Insurer, social regulation (Grid) and social integration (Group) are somewhat reliant on each other to manifest. That is, the existence of social regulation (in the form of rules, processes, hierarchies) is dependent on the existence of social integration for them to be accepted or rejected. It is proposed that whilst NDIT theory is correct to conceive of Group and Grid as distinct institutional forces, these may not materialise as completely independent in highly defined and enclosed settings such as the UK Insurer.

This chapter has also evaluated the role of agency and private philosophy in NDIT. It is not evident from the results of this study that agency and private thought are inherently influenced by an institution's NDIT thought-styles, and these will naturally express themselves in a manner that is contingent with a particular cultural bias, as Douglas asserts. The results also suggest that the respondents' views reflect a degree of psycho-social and desirability bias, which cannot be accounted for in the NDIT model. Consequently, it is not clear whether individuals will always commit to supressing private thoughts and opinions that do not align with their NDIT thought-styles and perpetuate classificatory systems and rituals to which they are not committed.

Finally, this chapter has made a normative claim that Hierarchism as a dominant culture is of benefit for an organisation like the UK Insurer, due to the level of systemic risk present in a Systemically Important Financial Institution (SIFI) and potential impact to society of failure. Therefore, it is argued that NDIT, when applied to certain large institutions and sectors including FS firms, should concede that there might be an optimal cultural mix and preferred dominant thought-style. This could be done whilst accepting that, as NDIT states, all four are necessarily present within the organisation, and all four thought-styles are detrimental in their total absence or excess.

CHAPTER 8: Conclusion

This chapter presents the key conclusions for this study, drawing on arguments from chapters 5, 6 and 7, and summarises the work's overall contribution to the study of risk culture.

First, it is worth re-stating that, as outlined in Chapter 1, the study of organisational culture is a multi-faceted and complex area of research. As discussed in Chapter 1, a number of meta-theories have been developed to conceptualise and analyse organisational culture, for example Quinn & Rohrbach (1983) and Martin (1993). Research on safety culture, for example Pidgeon & O'Leary (2000), has detailed the links between beliefs, norms, and organisational processes with the management of hazards. Other research on neurobiology (for example, Damasio (2015, 2019) asserts that culture is a response to biological motivations. There will remain therefore a multitude of approaches to understanding organisational culture, and it seems likely that research into understanding and influencing organisational culture will continue given its apparent criticality to organisational (and by extension social and economic) outcomes. NDIT was selected as the theoretical framework for this study because it is directly concerned with the cultural underpinnings of risk perception and risk taking. It therefore provides an explanatory framework for understanding and analysing varying responses to risk in FS firms. However, NDIT is also subjected to ongoing debate, both as a theoretical framework and the methodology for deploying it for cultural analysis of organisations. It is therefore acknowledged that potential limitations remain both within NDIT theory and methodology and in its application for this study of risk culture. This research has remained reflexive in its approach, simultaneously utilising NDIT whilst assessing and refining its theoretical components and research methodology. Such an approach has enabled the research questions to be achieved, which were presented in Chapter 1, as:

- Research question 1 (knowledge contribution). What are the risk perceptions and risk cultures present in the FS firm and what are the implications of these risk perceptions and risk cultures for the management of risk within the firm and for the FS sector? This question was addressed in chapter 5.

- Research question 2 (research design contribution). How do the risk perceptions and risk cultures compare under the three research methods and what are the implications for researchers employing NDIT? This question was addressed in chapter 6.

- Research question 3 (theoretical contribution). What are the implications for how NDIT is conceived? This question was addressed in chapter 7.

The main aim of this study is to develop understanding of risk culture within the FS industry using the work of Mary Douglas and subsequent Douglasian and NDIT scholars. Risk culture is integral to the stability of FS firms, as evidenced in existing guidance on risk culture issued by FS industry bodies, for example, the Financial Reporting Council (FRC), the Financial Conduct Authority (FCA) - and the prevalence of standard risk frameworks that mention culture (for example, ISO 31000 Enterprise Risk Management Framework).. However, industry guidance and discussion on risk culture are very limited, and therefore, questions remain on the fundamental determinants of risk culture, how to measure and stratify risk culture, and how to account for different cultures and perspectives within an FS firm. Furthermore, relatively little academic research exists on risk culture in FS firms to date, and existing studies have limitations. Whilst NDIT has been previously used to analyse risk culture in FS firms (Underwood, Thompson and Ingram, 2014) (Thompson, 2016), studies are limited in their scope, focusing only on the executive level, and attitudes towards specific risks and the insurance industry, rather than focusing on ways of organising (this being core to NDIT). This is the first in-depth NDIT study using mixed methods to investigate risk culture in an FS firm.

Using NDIT this study has identified four distinct risk cultures in a UK Insurer. The characteristics of each culture supports an assessment of how dominant and sub-dominant cultures might impact policymaking in respect of the UK Insurer's risk framework, how it makes risk decisions and how it communicates about risk.

Secondly, this study evaluated and critically compared three research methods commonly used across NDIT studies – namely, a quantitative survey to measure NDIT thought-styles, a survey that asks respondents to select a risk statement aligned to each of the four NDIT thought-styles and eliciting qualitative opinion that is then categorised into NDIT thought-styles. A novel survey instrument was designed for quantitative measurement of risk cultures using foundational concepts from Douglasian theory which addresses identified shortfalls in survey instruments previously used in NDIT studies.

Finally, this study uses the outputs of the research into risk culture in a UK Insurer to provide additional insight into, and critique of, NDIT theory itself. The measurement of risk culture using the foundational concepts of Group and Grid means that specific observations on the nature of these have been possible, in addition to a discussion of the relationship between Group and Grid. Additional questions remain on the

and the role of private thought in NDIT which the study results suggest is not fully accounted for in the existing theory. It is also argued that whilst NDIT maintains that none of the four thought-styles are preferable as a dominant culture within an institution, this can be challenged in light of this study.

Sections 8.2, 8.3 and 8.4 summarise in turn the research findings set out in Chapters 5, 6, and 7. A summary of practical and theoretical implications of this study is provided in section 8.5, and section 8.6 comments on the limitations of the research. Finally, section 8.7 outlines suggestions for future research into risk culture in FS using NDIT.

8.1 Risk Cultures within a UK Insurer and implications for the FS industry

This section summarises the findings in relation to the first research question - *What are the risk perceptions and risk cultures present in the FS firm and what are the implications of these risk perceptions and risk cultures for the management of risk within the firm and for the FS sector*? - and will summarise the contributions made by this study in answering this question.

Since the financial crisis, risk culture has been a key area of focus for businesses, governments, and regulators. 'Poor culture' is nearly always cited as a cause of failure in the FS industry. This has precipitated numerous publications and guidance papers including, for example, from the Bank of England (Gieve, 2009) (Bank of England, 2018) and Corporate Governance authorities (Financial Reporting Council, 2011; 2016; 2018). Despite its evident importance, the concept of risk culture is underdeveloped and there is very limited existing research investigating risk culture in organisations. Industry bodies, including the Institute of Risk Management, and FS Regulators have only produced a loose definition of risk culture, and the UK FS Regulator, the FCA (Financial Conduct Authority), states that it will not prescribe what a firm's culture should be (Davidson, 2018), instead signposting various desirable attributes in their publications (see, for example, Davidson, 2018). The determinants of risk culture remain unaccounted for, and there appears to be an underlying assumption from FS firms and the FS Regulator that a single monolithic culture is both desirable and achievable. In practice, FS firms seem to conceive of, and measure, culture through tangible 'indicators' and manifestations of good or poor behaviour or outcomes. Additionally, FS firms and the FS Regulator are aware that corporate governance requirements can be superficially evidenced in terms of 'box-ticking' without the desired underpinning culture to prevent loss and harm to the business. In response to the ambiguous nature and undeveloped concept of risk culture, NDIT is presented in this study as a potential approach to define, stratify, and measure risk culture using an established and transmutable anthropological framework devised by

Douglas and subsequent scholars. NDIT provides FS firms with an opportunity to evaluate their risk culture systematically and comprehensively, whilst understanding the impact of multiple thought-styles on the organisation.

The research has been successful in identifying four NDIT thought-styles in the UK Insurer, as NDIT would predict exist in every institution. It is evident from qualitative feedback from participants that the NDIT thought-styles influence how risk is perceived and managed across the UK Insurer, and therefore comprise four risk cultures. Each of the four risk cultures are present across the sample population but also in each functional area, office location and seniority level: including being present in groups as small as 15 people. This evidences that, contrary to common views held by FS firms and the FS Regulator, the risk culture within FS firms is not homogenous. A major contribution of this study is therefore an enhanced understanding of how risk cultures manifest in FS firms, the nature of each culture, and potential implications for risk framework embedment, risk communication and risk decision-making.

The dominant risk culture is Hierarchism, with just over half of respondents in the UK Insurer (55%) categorised as this thought-style. Overall, each thought-style in the UK Insurer manifests according to the typical characteristics of the NDIT thought-styles, with some exceptions identified and discussed in Chapter 5. The Hierarchists are in favour of monitoring and controlling risk, though display concerns for commerciality and efficiency where risk management measures are stifling or excessive. The Enclavists (21% of the population) are sceptical about top-down decision-making, prefer risk management by consensus and are particularly sceptical of the impact of risk and compliance teams on risk decision-making. The Isolates (17% of the population) are also present at each level of the organisation, including, perhaps surprisingly, at senior leader level and at the UK Insurer's head office. More significantly, as the Isolates are less integrated into decision-making, they are less able to influence risk management decisions and their feedback alludes to a culture of problems being hidden. This is significant for the UK Insurer as it may mean that critical information is not properly acknowledged or reported in some areas. This sentiment is also present in the Individualist feedback who suggest that prescriptive risk management measures have the potential to mask 'what is really going on', and support individual autonomy to address the specificities of a situation rather than follow protocol.

This presentation of four distinct thought-styles in the UK Insurer has consequences for the approach to risk management in FS firms. There is an overarching implication that Executives within the UK Insurer may only engage with the dominant thought-style, namely Hierarchism, meaning that the perspectives of non-Hierarchist thought-style may not be obtained or be overlooked.

Additionally, it is argued that traditional Enterprise Risk Management (ERM) frameworks are based on clear roles and responsibilities, prescriptive requirements and collaboration, are high-Group and high-Grid, and are therefore inherently Hierarchist. This means that the established method of risk identification, monitoring and reporting is only fully acceptable to one thought-style. Consequently, employees may not fully embrace established set protocols, or embrace them in a 'tick box' fashion to satisfy formal requirements but with little 'follow-through' or action. This is further evidence of the existence of what Ingram et al (2014) describes as 'Potemkin's ERM' – that is, carrying out stipulated practices without accepting the underlying beliefs, and therefore without any meaningful reliance on those practices (Ingram, Underwood and Thompson, 2014, pg.11). This finding is potentially significant for FS firms as they try to establish and embed robust and predictable ways of identifying and mitigating risk.

The existence of multiple risk cultures also appears to influence risk communication and how risk decisions are made. For example, as risk frameworks and policies may not be embraced by each thought-style, multiple sources of risk insight may not be accounted for. Risk communication in the UK Insurer seems to be navigated via language, terminology, and cultural boundaries such as professional function, which may overlook insights from non-dominant thought-styles. This might undermine the UK Insurer's ability to recognise and respond to all types of threats and opportunities. The survey data reveals a variation in decision-making styles, with Hierarchists and Enclavists typically preferring orderly and consensus-based decisions, though as NDIT predicts, Individualists appear to prefer greater autonomy and individual accountability. The survey comments overall reflect tension between collective action and individual autonomy, with all four thought-styles displaying a degree frustration about how decisions are allocated and managed.

Chapter 5 further argues that the prevalence of Hierarchism in the UK Insurer is not surprising given the public scrutiny and level of Regulatory supervision applied to the FS industry since the 2008 financial crisis, during which an Individualist culture appeared to dominate. Without a longitudinal study, it is not possible to ascertain to what extent the cultural mix is cyclical (as NDIT would assert), and the extent to which culture has shifted since the 2008 financial crisis and, more recently, following the Covid-19 pandemic. On balance, it is argued that the current prevalence of Hierarchism can be considered advantageous to the UK Insurer in achieving its objectives. This is because Hierarchism will, due to its high level of Group and Grid, encourage consistency, transparency, data-informed decisions, and ensure those with authority and experience are held accountable for their actions, and to implement a preventative control environment (possibly under the auspices of a formal ERM programme) that will

limit harm and loss across key risks. These outcomes are somewhat less likely to emerge under the other three thought-styles due to their typical ways of organising and attitudes towards risk management frameworks, as evidenced in the qualitative feedback. The benefits of a predominantly Hierarchist culture within FS firms is argued in Chapter 7. This challenges the Douglasian assumption that none of the four NDIT thought-styles are favourable over the others and that they all have equal propensity for good or harm. In this respect, this study offers a distinct contribution to existing Douglasian literature by arguing that one of the four thought-styles is preferable to the others within a specific context.

The conceptualisation of risk culture presented by NDIT, and existence of multiple thought-styles in the UK Insurer has broader implications for the FS industry and the UK Regulator (the Financial Conduct Authority). As highlighted above, the Regulator conceptualises risk culture through protocols of governance, rewards, purpose, and leadership style, and assumes that a monolithic risk culture can be created. The outputs of this study suggest that the Regulator ought to embrace the possibility of multiple risk cultures in FS firms, and moreover, this need not be viewed as disadvantageous. No one risk culture has an infallible perspective on risk or risk management, and all may contribute positively to the organisational response to risks. Whilst the existence of four thought-styles may present challenges on collaboration, it also presents the opportunity for FS organisations to have a more nuanced understanding of their cultures, and therefore, to be better placed to manage risk.

The influence of NDIT Group and Grid dynamics in creating culture challenges the Regulator's assumption that a desirable risk culture can be created 'top-down' through leadership role modelling and individual accountability. This has implications for the FCA's Senior Manager & Certification Regime (SM&CR) regime that holds individual executives legally accountable for the actions of the firm (FCA, 2015), because such executives are effectively accountable for shifts in cultural dynamics that they may not fully understand or be able to control. It also implies a challenge for leaders of FS firms as they should be cognisant of the existence of multiple cultures and allow for flexibility of thought and risk management approaches across the organisation. Leaders of FS firms may also find it difficult to remain agnostic of each of the thought-styles, and should guard against becoming excessively entrenched in one thought-style themselves and ensure they, as far as possible, retain a balanced perspective.

This study argues that the Douglasian understanding of risk culture could help the Regulator take a broader view of risk culture in FS firms, and one that allows for conflicting views and perspectives. It would also help the Regulator to account for the emergence of cultures that do not seem to align with leadership role modelling. It could also help the Regulator explain the emergence of conflict, failures and

losses within companies that appear to be well-controlled, for example in Hierarchist or Isolate (high-Grid) cultures where rules and protocols are central to ways of working.

The insight generated by this study for FS firms significantly extends beyond that of existing academic research into risk culture in the FS industry. Theories proposed by researchers such as Powers et al (2013) and Mikes (2009; 2011) explore risk culture through tangible and empirical manifestations, but do not explore cultural causality (for example, Group and Grid dynamics). They also do not acknowledge or explain the coexistence of multiple perspectives within the same organisation, or sources of conflict, or the source of behaviour that does not align to the dominant culture. Each of these aspects are addressed in this study of risk culture using NDIT, and are examined in depth as part of the analysis of risk culture in a UK Insurer. Furthermore, a recent publication, *Beyond Bad Apples* (2020), emphasises the need for an institutional approach to understanding risk culture, explicitly rejecting the notion that individual agents ('bad apples') are responsible for organisational failure. However, its authors do not submit an authoritative definition of risk culture, nor does it provide insight into how to manage and measure risk culture. This gap is addressed by this study, in that it demonstrates an approach to determining risk culture, and discusses the normative implications of each identified culture within the UK Insurer.

It is apparent that there has been a prior disconnect between academic studies into risk culture, the FS Regulator's understanding of culture. This study has, for the first time, provided a transferable academic framework for understanding culture (NDIT) in FS firms and identified relevant insights on risk culture in a UK Insurer that may advance the understanding of FS firm culture for the FS industry and Regulator.

8.2 Comparing and evaluating NDIT research methods for the research of risk culture

The second major contribution of this thesis has been to revisit and develop the research methods used to study culture using Douglasian theory, which is the focus of Chapter 6, and answers the second research question: *How do the risk perceptions and risk cultures compare under the three research methods and what are the implications for researchers employing NDIT?*

This study employed a mixed method approach as part of a pragamatist research paradigm, which has allowed it to achieve its aims of investigating risk culture in a UK FS firm, whilst refining elements of NDIT research methodology and NDIT theory itself. There has previously been a dearth of mixed method NDIT studies which this research has addressed. The research approach involved concurrent deployment of two quantitative methods and one qualitative method that are all commonly used to

measure culture in NDIT studies. This allowed for comparison and evaluation of each of the three research methods, and conclusions are drawn about their effectiveness, in addition to the potential merits of mixed method NDIT research. The advantages of this approach and contributions to understanding of NDIT research methods are explored below.

In part 1 of the survey, a novel survey instrument was used to measure the underlying dynamics of Group and Grid, rather than the four thought-styles themselves, thereby addressing shortcomings in traditional quantitative NDIT studies (see, for example, Dake, 1992). Specifically, the survey instrument designed for this study overcomes the circularity inherent in measuring CT 'worldviews' rather than level of Group and Grid dynamics, and the politically imbued questions that are typically used in NDIT surveys (for example, those in *Appendix 1*). The question design also avoids being contextually too broad or too narrow to tell the researcher anything about the institution being studied. Furthermore, the conceptual foundations for NDIT research methods - either quantitative or qualitative – are typically not stated by researchers, and they instead rely on implicit characteristics of each of the four thought-styles to identify them. The Group and Grid questions designed for this research address each of these shortcomings from previous studies.

It is argued that the Group and Grid survey instrument provide a sufficient depiction of four distinct thought-styles in the UK Insurer. The Group and Grid questions were formulated using conceptual 'predicates' from existing Douglasian research, detailed in section 3.5.3 on survey design. Chapter 6 acknowledges that the Group and Grid survey questions could be further refined to ensure the underpinning predicates and question wording most accurately reflects Douglasian concepts. However, the survey instrument allowed for the identification of four NDIT cultures, and with some potential refinement, could be re-used in future organisational NDIT studies and/or support comparative studies of FS firms or wider institutions.

In parts 2 and 3 of the survey, the thought-styles derived from the Group and Grid questions are contrasted with responses to the risk statements, and qualitative comments. This generated some interesting disparities which are discussed in Chapter 6. The results from the selected risk statements reveal a disconnect between the espoused views of the population (albeit still oriented towards Hierarchism) and reported individual experiences of Group and Grid. Additionally, the qualitative comments reveal a bias towards Individualism, which contrasts the findings from parts 1 and 2 of the survey that both suggest that the dominant culture in the UK Insurer is Hierarchism. This finding is significant because it has highlighted that different methods to identifying culture in NDIT studies can

return different depictions of culture, which has not been evidenced in previous studies, and would not have been apparent if just one data collection method has been used. When the risk statements and qualitative feedback methods are used in isolation they appear to be less reliable methods of establishing NDIT thought-styles. Specifically, it is argued that the selected risk statements and qualitative feedback are more susceptible to social desirability bias, informant bias, emotional input from the respondent, and subjective interpretation on behalf of the researcher. However, when used in combination with the Group and Grid questions, the risk statements and qualitative comments provide additional insight into the espoused attitudes of the surveyed population. In conclusion, whilst all NDIT research methods carry an element of subjectivity, it is argued that the Group and Grid survey questions are the most reliable method of deriving NDIT thought-styles of the three methods deployed.

The majority of NDIT studies employ either quantitative (survey-based) methods or qualitative methods, such as interviews, focus groups and case study review. Only a small minority have employed a mixed method approach where qualitative methods (such as focus groups) have been used in an exploratory capacity to evaluate quantitative findings (for example, Jordan & O'Riordan 1997; Manzi 2006; Marris et al. 1998; Bellamy & Hulme 2011). The mixed method approach to understanding risk culture in an FS firm has been successful in identifying the cultural mix of the organisation and providing insights into the impact of risk cultures on adopting risk frameworks, communication and decision-making. The mixed method approach appears to be advantageous for studies of risk culture in organisations where normative implications of the data is of particular interest, or in other words, the practical implications of the four thought-styles and how they might influence decision-making. It would not have been possible to establish this by adoption of only the quantitative survey questions or the qualitative feedback question.

The results of this study further emphasise the challenges associated with mixed method research, particularly when the outputs do not align or contain contradictory or paradoxical information. As a result of this study, it is recommended that NDIT researchers prioritise one source of information as 'primary' (as this study did for the Group and Grid questions) to reduce the impact of differing results. The researcher much also be willing to explain any disparity between mixed method outputs, as Chapter 6 of this study does. It can also be argued that triangulating different types of data produces more, as opposed to less, objective results and highlights nuanced opinion across the studied sample. Each of the three parts of the survey provided additional insight into how the surveyed population thinks about risk in the UK Insurer, which is discussed in Chapter 5. The three parts of the survey further highlighted the complexity inherent in conducting NDIT studies and the complexity of the NDIT theory itself. Therefore, whilst the mixed method approach for NDIT studies involves significantly more preparation, data analysis

and discussion, it is argued that it substantially enhances the value of exploratory studies into an organisation's risk culture.

Consideration has been given to the relative paucity of NDIT mixed method studies, and it is likely that resource constraints, research expertise across mixed methods, and ease of reporting mixed method studies are significant factors. This study further highlights the challenges and complexities associated with mixed method research, specifically, the depth to which the data has to be analysed and reconciled in order to draw meaningful conclusions. There is a specific risk for NDIT research that quantitative and qualitative data produce conflicting portrayals of the surveyed population, which then potentially undermines the researcher's theoretical assumptions and make the results more difficult to interpret. Therefore, mixed method NDIT research requires that the researcher is somewhat flexible in their appreciation of NDIT theory, because a rigid application of the theory may make results more difficult to explain. By contrast, this study has used the quantitative and qualitative outputs to critically evaluate NDIT research methodology and NDIT theory itself, using a reflexive approach supported by a pragmatist paradigm.

8.3 Implications for NDIT when investigating risk culture in the context of an organisational study

The third major contribution of this thesis has been to revisit NDIT, which is the focus of Chapter 7, and answers the third research question: *What are the implications for how NDIT is conceived?*

This study advances understanding of NDIT theory in a number of key areas - namely the foundational concepts of Group and Grid, the role of private thought in the NDIT model and the purported neutrality of the four NDIT thought-styles, which are the focus of Chapter 7. Each of these contributions are discussed in detail below.

Developing and deploying a novel survey instrument based around the Douglasian concepts of Group and Grid has facilitated a theoretical examination of these dynamics in a way that other studies that measure each of the NDIT thought-styles (or worldviews) have not. The study has affirmed that of the two Douglasian concepts, Group is a more clearly defined and contained dynamic as Douglas herself identified in her work. Additionally, the potential sources of group pressures that sustain the Group dynamic within the UK Insurer have been discussed; these are external to the transferable NDIT model and are therefore ambiguous in nature and origin. By contrast, this study evidences that the Grid dynamic

is more complex and is underpinned by multiple interlinked concepts. Whilst the nature of Grid remains open to debate, it is argued that it is most closely aligned to six of the Grid questions employed in this research, which were derived using concepts or 'predicates' from Douglasian literature (Hampton, 1982, and Gross & Rayner, 1985, in addition to the Douglasian concepts of classification and ritual). These questions suggest that ascribed roles, hierarchical interaction, clearly demarcated roles and responsibilities, well defined methods for performing tasks, and management of deviation against expectations are core to the concept of Grid, as it manifests in the UK Insurer. Additionally, the results suggest that individuals have the potential to experience – and report – high-Grid environments differently. This finding further distinguishes Grid from the Group dimension and has implications for NDIT research that aims to measure Group and Grid, because tests for internal consistency (such as Cronbach alpha) may not return a traditionally acceptable score.

The survey data also, unexpectedly, suggests a low but consistent and statistically significant relationship between the Group and Grid dynamics. This is contrary to NDIT theory which asserts that Group and Grid are wholly independent of each other. The correlations between elements of Group and Grid may mean that they are not wholly distinct social forces, and, in a large institution like the UK Insurer, social regulation (Grid) and social integration (Group) are somewhat reliant on each other to manifest. That is, the existence of social regulation (in the form of rules, processes, hierarchies) is dependent on the existence of social integration for them to be accepted and enacted, or rejected. For example, if a high-Grid environment is considered to comprise (amongst other attributes) robust shared systems of classification, as NDIT suggests, it is reasonable to assume that a level of social awareness and cooperation is required to enact these. It therefore is proposed that whilst NDIT theory is correct to conceive of Group and Grid as distinct institutional forces, these may not materialise as wholly independent in highly demarcated and enclosed organisational settings such as an FS firm, and may have the ability to interact with and strengthen or undermine each other. This challenges the view that individuals will always occupy a position on the Grid axis that is completely uninfluenced by their position on the Group axis, and vice versa (see fig.1.7). The relationship between the Group and Grid dynamics has not been previously explored in NDIT studies, as they are assumed to be independent forces, and this finding is worthy of consideration in future studies to assess the relationship further.

Chapter 7 also evaluates the role of agency and private philosophy in NDIT. The results of this study challenge Douglas' assertion that agency and private thought are influenced by an institution's NDIT thought-styles, and that private thought aligns to a particular cultural bias. This is because the results reveal a disconnect between the thought-style derived from Group and Grid questions from part 1 of the

survey and the thought-styles indicated by parts 2 and 3 of the survey. The results also suggest that the respondents' views reflect a degree of psycho-social and desirability bias (for example, in the selection of risk statements) which cannot be accounted for in the NDIT model, if it is assumed that private thought aligns to cultural bias. Consequently, it is not clear whether individuals will always commit to supressing private thoughts and opinions that do not align with their NDIT thought-styles and perpetuate classificatory systems and rituals to which they are not committed. The qualitative comments returned by the Isolates in the UK Insurer in particular, reveal a disconnect between their private views and their reported experiences of Group and Grid, which might reflect the suppression of choice and subsequent dissatisfaction that these individuals experience. These findings have demonstrated that the relationship between NDIT and agency and private thought remains open to exploration, and that further research may reveal the extent to which private thought is a precursor to instability, change and dynamism in the NDIT model.

Finally, as outlined in section 8.1, this thesis challenges the presumed neutrality and equality of each of the NDIT thought-styles – i.e., that none of the four thought-styles are more desirable than the others regardless of organisational context. It is argued that Hierarchism as a dominant culture is of benefit for an organisation like the UK Insurer, due to the level of systemic risk present in a Systemically Important Financial Institution (SIFI) and potential impact to society of loss of control or failure (such as the 2008 financial crisis). This is because of the behavioural patterns present within a predominantly Hierarchist culture is more likely to ensure that the organisation observes rules, limits, regulatory boundaries (Grid) in a cooperative and cohesive manner that emphases collective goals over individual success (Group). Whilst Douglas indicated an affinity for Hierarchism in her work, prior NDIT research has not made normative claims on the suitability of a single thought-style, or mix of thought-styles, for a particular institution or social environment. By contrast, this study argues that when applied to FS firms, NDIT should concede that there might be an optimal cultural mix and preferred dominant thought-style. This is argued whilst accepting that, as NDIT states, all four are necessarily present within the organisation, and all four thought-styles are detrimental in their total absence or excess.

8.4 A summary of practical and theoretical implications

The next section will consider the practical and theoretical implications of this study, including where its outputs could inform wider professional debates.

8.4.1 Theoretical implications of this study

This study progresses theoretical knowledge of NDIT, in particular by revisiting many of its foundational concepts, and by significantly advancing the study of risk culture using NDIT.

The Douglasian concepts of Group and Grid have been further explicated and evaluated via both the survey design (the formulation Group and Grid survey questions) and analysis of the results. This has highlighted that key assumptions underpinning NDIT theory remain open to discussion and debate – including the origin of both Group and Grid, their boundaries and definition, their status as unidimensional constructs, and their assumed independence from each other. Whilst conclusions are presented in this study on the nature of Group and Grid, the discussion provides further opportunity to explore both concepts.

This research has further demonstrated the broad relevance and applicability of NDIT to the study of risk culture, in respect of which there has been a key research gap to date. By extension it has made a significant theoretical contribution to the study of risk culture in large organisations, by proposing a transferable framework for analysing risk culture. It is also a theory that can account for the causality of risk culture, which prior research into risk culture has not proposed. This study has shown that NDIT is also able to account for the presence of different risk cultures and different perspectives in the same organisation, which previous theoretical frameworks for understanding risk culture (such as publications from the Institute of Risk Management) have not been able to. Additionally, the theoretical understanding of the four NDIT thought-styles as they manifest as risk cultures has been advanced by the data collected in this study. The data obtained from the UK Insurer has enabled an assessment of how each thought-style thinks about risk, and their typical views towards risk frameworks, risk communication and risk decision-making. In this sense, the study has shown that a theoretical construct for analysing risk culture can become one that also has practical application and relevance.

Furthermore, this study has also established the relevance of the Douglasian concepts of classification and ritual to the study of risk culture and the development of risk management practices. The data obtained by the study supports the idea that systems of risk management - such as the ERM (enterprise risk management) frameworks in the UK Insurer - are comprised of classificatory boundaries and ritual

activity. Therefore, adoption of ERM frameworks may be reliant on the dominant risk cultures within an organisation to sustain them. This is significant for the study of risk management and for risk practitioners, who may assume that risk management frameworks are not subjected to cultural bias by design or operation.

The study of risk culture in FS firms using NDIT has led to a normative claim about the appropriateness of the dominant thought-style of Hierarchism in the UK Insurer, which explicitly challenges the assumption that each of the NDIT thought-styles are equally desirable as dominant cultures in every context. It is argued that Hierarchism is appropriate for a Systemically Important Financial Institution (SIFI) of scale, as it is more likely than other thought-styles to introduce structured and preventative responses to key risks. This evolves the theory of NDIT as it asserts that one dominant thought-style could, in certain circumstances, be more desirable in support of organisational objectives.

From a methodological perspective, this research has confirmed and demonstrated the value inherent in mixed method NDIT studies in terms of its ability to provide broad analysis of the UK Insurer and qualitative insight into its risk culture. It has shown that NDIT studies may reach different conclusions depending on the method adopted (whether quantitative or qualitative), and that further insights into the phenomenon under investigation are forthcoming by using both quantitative and qualitative methods in NDIT research. Finally, the NDIT research methodology derived for this study is transferable to other organisational contexts, which could facilitate comparative review of firms and industries, or longitudinal studies.

8.4.2 Practical implications of this study

This study can enrich the way firms, regulators and industry bodies understand, monitor and navigate risk culture in FS firms, potentially as part of a range of approaches to analyse organisational culture. Since commencement of this study, risk culture in FS (and the broader themes of organisational culture and conduct) continues to be a focal point in publications from the UK FS Regulators and management consultancies. An example, the Bank of England's Consumer Duty CP21/13 regulation reinforces standards of conduct for FS firms and their duty to eradicate harmful business practices (FCA, 2021). Whilst the financial crisis of 2008 helped to demonstrate that risk culture is pivotal to the success or failure of an industry, and by extension global market security, there is a sense that more can be done to ensure that FS firms not just avoid systemic failure but operate in a fair and resilient manner. It is

therefore clear that the FS Regulator, FS firms and consultancies are still very much concerned with how to identify and monitor risk culture to minimise the likelihood of failures in the FS industry.

FS firms are likely to adopt a range of approaches to understand their risk culture given the range of potential disciplines and frameworks used to analyse it. For example, a recent publication on culture in financial services (Miles 2021) draws together input from political science, economics, law, cognitive psychology, linguistic and narrative analysis. It therefore seems unlikely that the FS industry will arrive at a single approach to identifying and monitoring risk culture. It also seems debatable that any system of risk culture management will definitively and absolutely regulate a firm's culture and prevent failure. However, FS firms are expected to demonstrate that they understand their culture, its potential strengths, and shortfalls, through necessary means. This study presents NDIT, for the first time, as a means of understanding risk culture in FS firms.

There are multiple potential applications for NDIT in the study of risk culture in FS firms. For example, FS firms might wish to use NDIT analysis as part of holistic monitoring of firm culture and conduct, and repeat the analysis periodically to monitor change. The mixed method research approach to analysing risk culture used in this study could allow FS firms to create a comprehensive picture of their risk culture and evaluate the implications of their dominant and sub-dominant cultures. This would allow them to understand the strengths and potential shortcomings of their risk culture. For example, if Individualist and Isolate cultures pose a higher potential for unmanaged risk as the dominant thought-styles in FS firms (as argued in chapter 5) then the firm's management may wish to take additional action to ensure risks are being formally captured and acted upon and not concealed or overlooked. Furthermore, the results of this study also highlight an element of fragility in Hierarchism as a dominant culture, and of the types of risk management approaches that Hierarchism supports (i.e. traditional ERM models). Whilst Hierarchism supports a formal and structured approach to risk management, with clearly delineated roles and responsibilities, this can generate a level of underlying frustration across the employee population. This suggests that approaches to risk management are susceptible to change and disruption according to broader cultural change, and in response, management of FS firms could anticipate and respond to such disruption to maintain an appropriate level of risk control and oversight.

There are wider professional debates that could be informed by this work. For example, the FS Regulator and executives of FS firms might consider whether cultural interventions via oversight, prescription and compliance rules will always engender the desired result of behavioural change, due to the existence of multiple cultures and the dynamism inherent in NDIT. This is because more prescriptive control could

engender a shift in the risk culture as each thought-style seeks to protect its way of organising and values. Furthermore, NDIT calls into question the role of the leader in setting and embedding a desired culture. Under SM&CR (Senior Manager and Certification Regime), executives are accountable for creating a desirable culture through 'top-down' role modelling, whilst NDIT evidences that risk cultures manifest as a result of underlying Group and Grid dynamics, not just the actions of a senior individual. Therefore, NDIT would maintain that the ability of individual leaders to dictate risk culture may be limited, and a change in cultural mix may take time to manifest. Such factors may not dramatically change the approach to management and supervision of FS firms. However, it could shift the conversation on risk culture to one that is cognisant and embracing of multiple risk cultures, rather than just one, and the value that each can bring to an organisation. Additionally, whilst the focus of the study has been risk culture in an FS firm, the topic of risk culture is a key concern across wider industries and government; therefore the findings may be useful to other organisations as they navigate the notion of risk culture.

8.5 Limitations of this research

All academic research has limitations, due to the boundaries placed around the research and the type of research methodology employed. This study possesses potential limitations concerning the research methods for data collection, conflicts or bias arising from the insider status of the research, and limited generalisability of the findings – which are discussed in turn below.

Firstly, there are clear opportunities to refine the survey instruments, which could be a potential limitation of the data collection process in their current format. Section 6.3 evaluates the questionnaire developed to measure Group and Grid dynamic and proposes that revisions are made to improve theoretical alignment to NDIT, uplift internal consistency (Cronbach alpha), and aid participant understanding. Furthermore, it is recommended in section 6.4 that the risk statements are split into individual sentences aligned to each of the four thought-styles to provide a more precise and nuanced view of participant sentiment. Such recommendations are designed to improve the accuracy of the survey instrument in future studies. Relatedly, it is highlighted in section 6.4 that social-desirability bias may have influenced the selection of risk statements which may further impact the accuracy of data obtained. However, all survey instruments used in NDIT, and the data they produce, carry an element of subjectivity. Therefore, it is maintained that the survey instrument, as is, provides sufficient delineation of distinct risk cultures to achieve the aims of the study. It is also worth considering that the insight derived from the data on the functionalist nature of NDIT, and the interaction between the four thought-styles, is limited due to the survey method used to collect data. This could be improved in future studies by more direct questioning of how each of the four

thought-styles perceive certain behaviours and values, or by conducting interviews and focus groups to understand interaction between groups of people.

The second potential limitation of this study is the insider status of the researcher to the UK Insurer, which may have influenced the results of this study in two ways. Firstly, section 6.5.2 suggests that sentiment expressed in the qualitative comments may have been influenced by how the researcher is perceived by the respondents; this may be driven by 'informant bias' (Fleming 2018) or some participants may have viewed it as an opportunity for their voice to drive change (despite the survey introduction clearly stating that the data collection would not be used to inform management action). Furthermore, the researcher's insider status may have influenced the interpretation of qualitative data, including the coding of sentiment and categorisation of each piece of feedback into the NDIT thought-styles. However, it could be conversely argued that the researcher's insider status may have enhanced appropriate interpretation of the qualitative feedback, and therefore a balanced assessment of the impact of the researchers' insider status is required.

A third key limitation of this study is the generalisability of this research to other FS firms and across industries. This study involves data collected from one UK Insurer in late 2019. Therefore, it is unclear whether observations made in this study apply to other FS firms, including the nature of each risk culture and how they impact risk management practices. However, this study has been successful in using NDIT to evidence multiple risk cultures in an FS firm, and demonstrating that plural attitudes towards risk management exist, thereby achieving its research aim. It is expected that the same study in another FS firm could reveal a cultural landscape that possesses different qualities, but nevertheless are distinguishable using the transferable model of cultural analysis provided by this study.

8.6 Opportunities for future research

As highlighted above, this study has made advances across professional debates on risk culture, and in reviewing NDIT theory. Consequently, it has generated additional opportunities for future research that will either confirm or expand upon the findings of this study.

There is an opportunity to re-use the mixed method approach to identify the NDIT thought-styles and conduct comparative studies of two or more FS firms. This could potentially provide greater insight into the range of potential risk cultures within the sector. The survey data could be compared with the scale, objectives, financial performance, and external reputation of each FS firm to evaluate whether a

relationship exists between the nature of an organisation and the mix of thought-styles. For example, it may be possible to affirm or challenge the view that one dominant thought-style (for example, Hierarchism) is preferable across the sector. Additionally, longitudinal studies in one or more FS firms that track the mix of thought-styles over time could help to identify internal and external shifts that precipitate a cultural shift and provide more clarity on the dynamic element of NDIT theory as it applies to FS firms. Both prospective types of study would benefit the FS industry to further understand how risk culture is generated and maintained.

Finally, NDIT theory remains a complex and ambiguous field of academic research, which could be furthered in a number of directions. There is an opportunity to further evaluate Group and Grid concepts by redeploying or refining the survey instrument. It is also identified in this study that Grid appears to be a more complex and ambiguous concept than Group. Future research could further extricate this dynamic from Douglasian literature and develop additional means of identification and measurement in organisational settings.

APPENDICIES

Appendix 1: Worldview Measures of Dake and Wildavsky
(Wildavsky & Dake, 1990)

Hierarchy

I support greater military preparedness. I'm for my country, right or wrong.*

I think I am stricter about right and wrong than most people.*

The police should have the right to listen in on private telephone conversations when investigating crime.*

The increased efficiency brought about by centralization of production is one of the things that makes this country great.

The law is the true embodiment of eternal justice.

There is very little discipline in today's youth.*

Compulsory military training in peace-time is essential for the survival of this country.

Individualism

I support less government regulation of business.*

Continued economic growth is the key to improved "quality of life"—living space for privacy, adequate food, leisure time available from work, education, income for comfortable retirement, and adequate medical care.*

If a man has the vision and the ability to acquire property, he ought to be allowed to enjoy it himself.*

Private profit is the main motive for hard work.*

In this country, the most able rise to the top.

The "welfare state" tends to destroy individual initiative.*

Democracy depends fundamentally on the existence of free business enterprise.*

It is just as well that the struggle of life tends to weed out those who cannot stand the pace.

Enclavist

I support intensified federal efforts to eliminate poverty.*

I support a tax shift so that burden falls more heavily on corporations and persons with large incomes.*

The human goals of sharing and brotherhood are being hindered by current big institutions and technological growth.*

What this world needs is a "fairness revolution" to make the distribution of goods more equal.

Much of the conflict in this world could be eliminated if we had more equal distribution of resources among nations.*

U.S. interference in foreign affairs is a very serious problem in society today.
Misuse of scientific and expert knowledge is a very serious problem in society today.*
Racial injustice is a very serious problem in society today.

Isolate

There is no use in doing things for people—you only get it in the neck in the long run.
Cooperating with others rarely works.
The future is too uncertain for a person to make serious plans.
I have often been treated unfairly.
A person is better off if he or she doesn't trust anyone.

Appendix 2: Group and Grid Predicates from Gross & Rayner (1985).
Group

- Proximity: Measure of closeness of group members, frequency of interactions

- Transitivity: Likelihood that if Member 1 interacts with Member 2 and 2 interacts with 3, then 1 will interact with 3
- Frequency: Proportion of time a group member spends in some activity with other member
- Scope: Diversity of a member's interactive involvement in group activities
- Impermeability: Likelihood that a nonmember who satisfies membership requirements will actually gain membership

Grid

- Specialization: Amount of possible roles a group member assumes in a given time span
- Asymmetry: Measure of lack of symmetry in role exchanges among group members
- Entitlement: Proportion of ascribed versus achieved roles in the group
- Accountability: Amount of member interactions in which one is dominant and the other subordinate

Appendix 3: Survey Instrument from Underwood, Ingram et al (2014)

There should be stricter regulation of our industry to protect the better-run companies from competition that is just cutting corners.
People get to the top as a result of hard work.

People who work the hardest are not always rewarded enough at some companies.
Companies need to be highly adaptable to succeed in the long run.
It is not vital for the company to worry about how equally people are compensated.
It is important to avoid getting too tied to any theory of business so that you are free to adjust when the situation changes.
The key to business success is to keep your options open, staying away from large long term commitments.
Sometimes the firm must give a higher priority to profits than to security.
The firm is better off going it alone and not placing much trust in other organizations.
Progressive income taxes are more fair than flat taxes.
Continued growth is important to the health of the company.
It's best to hire inexperienced people and train them ourselves.
The most intelligent people should get the most responsibility.
We should take maximum advantage of new technology to solve our firm's problems.
The treatment of companies by the regulators is often unfair.
Sometimes it seems that competitors get ahead mostly because they have been lucky.
Everyone in this company should be paid enough to support a good standard of living.
The company has the right to monitor employee emails, web browsing, and phone calls.
Some things are too important to be decided by cost-benefit considerations.
Fines for companies that break laws should be proportionate to their profits.
A successful business manager must be comfortable dealing with ambiguity and uncertainty.
People in leadership positions have earned better compensation and perks.
The country is best off if it gives companies the freedom to prosper.
Sometimes the firm must give a higher priority to security than to profits.
One of the problems with running a company today is that too many employees challenge authority.
I expect meetings to start on time.
We do not seem to have any influence in how things get done in our industry segment.
Management and the Board must clearly take responsibility for the safety of the firm.
If people in this company were treated more equally, then we would have fewer problems.
A firm should not take on any more risk than it absolutely must.
It is always important to keep the worst-case outcome in mind when making decisions.
In a fair system, people with more ability should earn more.
It is not wise to call attention to others' violations of laws and regulations.
One of the most important steps in decision making is to gather input and recommendations from experts on the key issues.
The company has a longstanding heritage that should be preserved.
Employees should be given information on a need-to-know basis.
It's usually not worthwhile to put much energy into long term planning, because you always have to change what you do to adapt to what's really going on.
The degree of inequality of income in the company is a problem.
Our firm should have a code of conduct and strictly enforce it.
If everyone followed all of the rules and regulations to the letter, business would never get done.

Appendix 4: Survey Participant Information Sheet

Research Project: Testing the "Cultural Theory of Risk" in a UK Insurer
Information for Participants: Online Survey

I would like to invite you to take part in a research study. Before you decide you need to understand why the research is being done and what it would involve for you. Please take time to read the following information carefully. Ask questions if anything you read is not clear or would like more information. Take time to decide whether or not to take part.

What is the research about?

This study is about Risk Culture - how organisations perceive and respond to Risk. In particular, it is looking at the influence of group bonds, structure and rules on attitudes towards Risks and how they are managed. The study also looks at how groups of people with different attitudes to Risk interact with and influence each other.

The study draws on an existing theory - the "Cultural Theory of Risk"- pioneered by British anthropologist Mary Douglas in the 1960s. Over the years, other academics have developed the theory and tested it in different companies and other settings such as government institutions. Similar studies to this one have been carried out, but this one is the first in a UK Insurer, and the first to look specifically at Digital risks and how they are perceived by different groups of people.

Why is the research being carried out?

This study will provide some unique insights into how Risk is perceived in organisations like ours and how our ways of working shapes this. The findings may be useful to [org name] and / or the wider industry.

How will the research be carried out?

The research will be conducted in 2 parts. An anonymous online survey is open to all UK-based employees that asks [x] questions about their ways of working and attitudes to Risk. There will then be three focus groups (York, Norwich and London) with participants invited at random. At the focus groups participants will be asked to debate a hypothetical 'Risky' scenario and decide how to tackle it. Their responses will be recorded and analysed.

Who is carrying it out?

This study is part of a PhD thesis being developed by a colleague, Martha Phillips. Martha has worked for [org name] for 10 years and is currently part of the UKI Operations team. She has been studying Risk Management at postgraduate level for the past 2 years at the University of York, and is looking to develop insights in Risk Culture that may assist our industry and the academic field.

Who has approved this research?

This research project is being sponsored by [UK CEO name] and [Operational Sponsor name]. It has also been approved by the University of York Ethics Committee.

Why have I been selected?

All UK-based employees are invited to take part in the online survey. We want to understand the views of as many people as possible – so your input really counts.

What are the possible benefits and risks of taking part?

The survey should take no more than 10 minutes. We cannot promise the study will benefit you but the information we get from the study will help to increase the understanding of Risk Culture in organisations like ours.

What will happen to my data? Is it confidential?

The survey is entirely anonymous – you will not be asked to give any personal information (e.g. names, role). Your functional area, location, grade and gender will be recorded so we can identify any broad trends in the data. All results will be analysed in aggregate (all together) and not individually.

The survey data is collected and held by a survey platform – Qualtrics – a service provided via the University of York. The University of York has obtained appropriate Data Privacy certification from Qualtrics.

Where will the results be shared?

A summary of findings will be shared with [UK CEO name] and [operational sponsor name] and we will then decide on the best way to play the information back to participants and the wider organisation. The results will not automatically be shared with anyone else.

This research is unrelated to [insert name of employee engagement survey].

What happens next?

If you are happy to continue with the online survey, please click here to begin: [link to survey]

Who do I contact for more information?

If you have any further questions please contact Martha Phillips [insert email and tel no].

Appendix 5: Study Instrument

Question number	Question	Measurement scale	Group and Grid Predicate (source)
Q1	People in my team work together to get things done, rather than delivering tasks alone	Likert 1-7	Frequency (Gross & Rayner) / Co-Operation (Hampton)
Q2	People in my team place greater importance on achieving shared goals than individual goals		Classification - shared values
Q3	My team use collaborative and open work spaces to get things done (virtual or physical)		Frequency (Gross & Rayner)
Q4	I feel I know everyone in my team well		Proximity (G&R) / Close Team (Hampton)
Q5	My team celebrates success and milestones (e.g. birthdays, leaving collections, project deliveries)		Celebrations (Hampton)
Q6	People in my team do their best to ensure colleagues across the team are included in discussions and decision-making		Transivity (Gross & Rayner)
Q7	Generally, people in my team are welcoming to new joiners		Impermeability (Gross & Rayner)
Q8	My team acts on input or contributions from other areas		Impermeability (Gross & Rayner)
Q9	My team get involved in each other's work, rather than just focusing on the tasks we are directly responsible for		Scope (Gross & Rayner)
Q10	Where I work, there is a strong sense of what the team stands for		Classification - shared values
Q11	People in my team get regular cascades of information, or team briefings, to support us in our roles		Ritual - management of information
Q12	My grade (seniority) and role in the company determines how I should act		Accountability (Gross & Rayner)
Q13	I change my approach to dealing with people depending on whether they are more senior or junior than me		Asymmetry (Gross & Rayner)
Q14	I have a highly defined role with a very distinct set of responsibilities		Specialisation (Gross & Rayner)
Q15	Getting input from the right experts or specialists is vital in achieving company goals		Specialisation (Gross & Rayner)
Q16	I tend to work within the boundaries of my role		Entitlement (Gross & Rayner) / Limited areas of responsibility (Hampton)
Q17	I normally receive formal performance feedback at specific times, rather than informal feedback delivered 'in the moment'		Insulation (Gross & Rayner)
Q18	My team tend to take direction from senior management on what to do rather than deciding ourselves		Asymmetry (Gross & Rayner)
Q19	I often need to react to things over which I have little control		Accountability (Gross & Rayner)
Q20	I stick to processes, procedures and standards in the way I perform my role		Rules and Regulation at work (Hampton)
Q21	In my team, if processes, procedures or standards are not adhered to, action will be taken to find out why		Classification - management of anomaly
Q22	The office space around me is restricted to people in particular roles or by people in more senior roles		Segregated facilities (Hampton)
Q23_1	HIERARCHIST Statement	Ranked 1-4	
Q23_2	INDIVIDUALIST Statement		
Q23_3	ENCLAVIST Statement		
Q23_4	ISOLATE Statement		
Q24_1	Poor customer service	Ranked 1-10	
Q24_2	Ineffective management of talent / people		
Q24_3	Regulatory and Legal change		
Q24_4	IT Service disruption		
Q24_5	Cyber attack / data loss		
Q24_6	Data Privacy		
Q24_7	Emerging and disruptive new competitors		
Q24_8	Pricing and Profitability		
Q24_9	Failure to embrace digital innovation		
Q24_10	Missed strategic or market opportunities		

Appendix 6: Risk statements and Underpinning Criteria

Criteria

1. **Adherence to frameworks**
    - Hierarchist: Strong preference for consistent risk management frameworks
    - Egalitarian: Prefers consensus based planning over top-down risk management frameworks
    - Individualist: Low preference for risk management frameworks
    - Fatalists: Will follow set frameworks
2. **Predictability and manageability**
    - Hierarchist: Risk is predictable and manageable with long-term planning
    - Egalitarian: Risk must be managed to prepare for worst case
    - Individualist: Risk should be responded to with a short-term horizon
    - Fatalist: Risk could be down to luck rather than management
3. **Reliance on Risk Data**
    - Hierarchist: Risk data is vital for robust risk management and strategy setting
    - Egalitarian: May have a distrust of some risk data; but keen to use it to prevent loss
    - Individualist: Empowerment and talent more important than risk data
    - Fatalist: Risk data used to manage tangible issues day to day; may perceive data to be of limited use
4. **Risk Decision-making:**
    - Hierarchist: Best done by those with authority and with information
    - Egalitarian: Best done by those 'in the work' and by consensus
    - Individualist: Best done by empowered individuals
    - Fatalist: Best done by those with authority; sceptical of decision-makers
5. **Risk appetite:**
    - Hierarchist: Cautious; tolerant to calculated loss
    - Egalitarian: Very cautious; not tolerant of losses
    - Individualist: Risk-taking if reward is right; tolerant of losses
    - Fatalist: Will respond to outcomes; tolerant of losses

Hierarchist / Manager

Risk is something that should be managed, and we need a robust risk management framework to protect the business. We should be able to rely on data to tell us the amount of risk we face and to avoid unpredictable outcomes. It's important that if the company suffers a loss, we get to the bottom of it and stop it from happening again.

Individualist / Maximiser

Risk can have a downside, but it's also a source of opportunity and profit for a business like ours. We are better off relying on skill, initiative and hard work to manage risk, rather than lots of processes and data. The business is best taking risks if the return is right.

Egalitarian / Conservator

Risk must be managed carefully including planning for worst case scenarios. It's better that we are too cautious than let the business come to harm. Risk decisions are best made by consensus and by considering different perspectives, rather than just relying on data and those in authority.

Fatalist / Pragmatist

Risk isn't something we can necessarily predict and manage - if something goes wrong, we may have just been unlucky. However, it's still best to follow relevant processes to manage risks and controls. Risk decisions should be made by those in authority who have access to the right information.

Appendix 7: Risk Types – Large Insurer

Rank in order of importance:

- Poor customer service
- Ineffective acquisition and retention of talent
- Regulatory and Legal change
- IT Service disruption
- Cyber attack / large data leak
- Data privacy
- Emerging and disruptive new competitors
- Pricing and Profitability
- Failure to embrace digital innovation
- Missed strategic or market opportunities

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