

A Futility, Perversity and Jeopardy Critique of ‘Risk Appetite’

Alasdair Marshall

School of Business, University of Southampton

Udechukwu Ojiako

College of Engineering, University of Sharjah

Hull University Business School, University of Hull

Maxwell Chipulu

School of Business, University of Southampton

Keywords: risk appetite, risk management, risk-taking, risk culture.

1. Introduction

Although risk measurement and risk optimality seeking views of risk appetite have received much sanction from regulators and professional associations (see for example IRM, 2011; BCBS, 2013; FSB, 2013; Aven, 2013a), the risk appetite concept has arguably not attracted nearly enough academic criticism. One line of criticism so far neglected considers its metaphorical nature. Much management literature *pro* and *contra* managerial use of metaphor has accumulated in recent decades. Morgan’s (1997) contribution is perhaps the most widely known. His classic text (ibid. p. 355) proposes that in order to ‘read’, ‘understand’ and ‘shape’ what happens in organisations, a vital skill is to “learn how to generate, integrate and use the insights of competing metaphors”. This advice reflects back on the longstanding academic criticism directed towards managerial use of metaphor (e.g. Pinder & Bourgeois, 1982), including Morgan’s own (1980, p.605) warning that the mind can easily become ‘imprisoned within metaphor’ where it lacks terms – perhaps even alternative metaphorical terms - for probing the managerial value of a metaphor and becoming alert to its flaws.

An interesting feature of Morgan’s solution, then, is its advocacy of fighting metaphor with metaphor. We might theorise such practice as particularly apt, and possibly sometimes essential, where a metaphor has become dominative for addressing complex managerial challenges and activities requiring semantic complexity reduction for purposes of practical management understanding. Metaphor which has become dominative within organisational power discourse (as with risk appetite when used to mould behaviour) can be viewed as especially problematic by inviting uncritical acceptance of all the logical thinking which is threaded together within the metaphor itself. We can reflect critically upon all such thinking

by viewing its correspondence to reality as always threatening to disconnect, with few noticing the points of disconnection or their possible consequences, let alone willing or able to speak up about these. Academic concern to develop lines of scrutiny for challenging widely used and dominative management metaphors, then, is essential.

Arguably this requirement for semantic complexity reduction manifests vividly within the grand metaphorical language game of strategic risk management wherever this represents organisations as striving to identify and then manage their risks using pre-determined evaluative criteria, most notably including 'risk appetite'. Note the two kinetic energy metaphors which might influence the mind here. Risks are modelled as 'things' which move as if with kinetic energy to 'impact' upon organisations, before they then move through risk management processes, also with kinetic energy, until 'captured' within risk registers or control systems – or indeed until 'eaten' by an organisation to satiate its 'risk appetite'. This is just one brief initial illustration of how risk management practice might become meaningful to some managers, through ideation formed from logically interconnected (and therefore appealing) yet highly problematic metaphors capable of explicitly or subliminally influencing perception.

As will be discussed in this paper, the seductive risk appetite metaphor carries the managerial imagination towards high level generalisation and abstraction where, compared with contemplation of very specific and concrete everyday management activities, prospects for clarity of thought in grasping the nature of the management challenges at issue are greatly reduced. While we assume the necessity of metaphor for the purpose of giving ideation to strategic risk management practice, and we even value the contribution of the risk appetite metaphor as a stimulus to thought, we nonetheless seek to improve managerial use of the metaphor by illustrating an analytical framework for testing limitations and categorising flaws, which we contend should be used more widely to critique and evaluate management metaphors. The approach taken will be to systematically analyse the various real world effects which use of the metaphor may produce. For this purpose we use an analytical framework developed originally by Hirschmann (1991) for the purpose of balanced scrutiny of social measures which tend to have both progressive advocates and conservative detractors, few of whom in the heat of political debate pursue balance let alone strive for it within a systematic analytical framework. Our choice of analytical framework may be of particular interest as one that switches between conservative-misanthropic and progressive-liberal human nature assumptions to ensure both illuminate our critical review of risk appetite and its possible effects.

Working within Hirschmann's framework, this critical review paper contributes to risk appetite literature (see Dupoy, 2009; Hillson, 2012; Aven, 2013a; Hassani, 2015; Marshall and Ojiako, 2015; Hoskisson *et al.*, 2016), by developing a more novel critical analytical framework than is currently available. To develop its critical insight into corporate use of the risk appetite metaphor, the paper also draws upon a particular *trinary* cluster of psycho-cultural problems associated with excessive risk-taking in large corporations (see Marshall *et al.*, 2015, p. 497), to furnish the discussion of the various flaw categories of risk appetite. In doing this, our critical review of the risk appetite concept illuminates "...a rich area for further exploration" (Dagdeviren *et al.*, 2017, p. 6), contributing to an evolving stream of conceptual research focused on practical advancements in understanding and engaging with "...the unsavoury, harmful and borderline criminal aspects of global business" (Dagdeviren *et al.*, 2017, p. 6). To this end, the study contributes to business risk literature as set out in this journal (see for example Mackenzie, 1998; Kirkhaug, 2010; Tipu, 2017).

The analytical perspective adopted will be highly critical of risk appetite. It will focus constructive criticism towards ambiguity over its nature (what it measures) and its purpose (what it guides). It will argue that although risk appetite may at first seem intelligible as a strategic measure of risk used for setting risk-sensitive behavioural guidance, questions of exactly what should be measured and guided are hard to agree and resolve; furthermore the risk appetite discourse of 'gaps' between real and ideal 'risk exposure levels'- or in some cases between real and ideal 'risk-taking levels'- will be considered as highly problematic and as an invitation to poor organisational practice. This perspective may incorrectly give the impression that the authors view organisational use of risk appetite as necessarily promoting over-optimistic, excessive or inappropriate corporate risk taking by corporations. However, this is not so. The authors acknowledge that corporations are in the business of risk-taking, and that specifications of risk appetite which regulate that risk-taking might also sometimes promote excessive risk aversion via over-intensive internal control.

The critical review of risk appetite is structured in seven sections. In the next section of the paper (section 2), a contextual overview of risk appetite considers Enterprise Risk Management (ERM) guidance and associated high level abstract strategic management practice. Following this, in section 3 we set out the broad analytical framework which we will later use to guide out critical review of risk appetite. We explain that this highly versatile analytical framework was originally developed to critique all manner of progressive social measures which might be considered by policy-makers, and as such it is particularly helpful for illuminating possible downside within unintended consequences. Yet we will explain that

it also seeks balance through consideration of upside.

Once section 4 has focused on implications of detailed ERM guidance for the nature of risk appetite, as well as for how and why it is used, section 5 will then work tentatively within the parameters of our analytical framework to elaborate on why organisational specifications of risk appetite may often fail. In section 6, the authors advance the argument that such specifications may, particularly in high risk-taking cultures, exacerbate pre-existing psycho-cultural problems commonly found there, in particular by stimulating covert, illicit risk-taking. The idea here is to theorise extreme organisational circumstances as a means to bring or criticisms of risk appetite into sharper focus. This is followed by a penultimate discussion section (section 7) which brings together a fuller, structured criticism of risk appetite which speaks fully to Hirschmann's analytical framework of perversity, futility, and jeopardy. The paper concludes (section 8) by recapitulating the paper's central critique of risk appetite and further proposing that risk appetite should continue to be regarded as a valuable risk management tool, requiring further development as a lever for cultural/behavioural change if it is to function well within strategic ERM.

2. Context – Risk appetite

In their advocacy of risk appetite as an organisational practice based on risk measurement, the Institute of Risk Management (IRM, 2011) mention that many different measurement approaches may be viable. They say this can entail the measurement of risk using a variety of ordinal scales, for example tapping shareholder or stakeholder value, or economic value added. This proposed measurement flexibility and diversity leads the IRM to view risk appetite as intrinsically "complex" (IRM, 2011, p. 7), and "not a single, fixed concept" (IRM, 2011, p. 8). Hence, we might begin by noting that no single measurement prescription seems likely to serve as a simple foundation for understanding risk appetite as an organisational practice.

An alternative way to make sense of risk appetite is to directly address the metaphor and explore how we might redeem it from the category error within logic created by pairing the terms 'risk' and 'appetite'. The following discussion also clarifies why it is potentially dangerous for risk management practitioners to work from an initial conceptualisation of risk appetite as a practice focused on making optimality-seeking adjustments to levels of risk exposure, or to levels of risk-taking, using any risk measure or combination of measures.

To view appetite literally, it might seem odd for any manager to be said to possess an appetite for a particular level of pure risk, or for a particular level of speculative risk-taking.

A conceivable exception might relate to very narrow circumstances, irrelevant for present purposes, where the appetite in question is for feelings of exhilaration sought as a reward experience through deliberate risk-taking. The key point is that appetites always take some gratifying reward as their object; hence, to refer to a pure risk which threatens a reward, or to speculative risk-taking which is instrumental in obtaining a reward, as the object of an appetite, is to commit a category error which attributes to appetites things that are not their proper objects. Correspondingly, use of any non-literal application of 'risk appetite' is potentially dangerous because irrational drift in perceived desirability (from rewards themselves to risks that threaten rewards or which are taken in pursuit of rewards) may occur whenever a risk appetite specification moves beyond the realm of measuring and describing risk into the realm of prescribing some ideal pure risk exposure, or level of speculative risk-taking. A manager faced with two options of either pursuing a reward at a determined risk level, or pursuing a reward at a *higher* risk level would normally be quick to choose the first option because it promises a superior risk-adjusted reward; unless, perhaps, they are confused by vulgar literalist interpretation of an instruction that their risk appetite should be higher.

A possible reply to this criticism helps gets us closer to understanding the core features of risk appetite practice, in particular by allowing us to theorise their emergence within the context of the rise of Enterprise Risk Management (ERM) since the early 1990s. Here we can think within the ERM paradigm of corporations as decision-making entities possessing 'appetites' for particular directions of travel through their risk environments. This entails understanding upside enterprise risk as the risk of ending up in a better place than targeted by strategy, and downside enterprise risk as the risk of ending up in a worse place than targeted by strategy (Dickinson, 2001). The IRM (2011, p. 15) advocate using 'fight' versus 'flight' terminology to explain the associated notion that risk appetite relates to strategic preferences used by corporate persons to move through risk environments, essentially as a corporate surrogate for the evolved flight and fight responses that permit individuals to negotiate their individual risk environments.

Following their guidance, we might view a decision to pursue one strategic option over another as entailing an 'appetite' for 'fighting', using various methods of risk remediation, the risks perceived to accompany preferred option one, while simultaneously taking 'flight' from option two and its attendant risks. Supporting this idea, it is notable that common language philosophy does allow for an 'appetite for a fight' where both fighting and winning on some strategically chosen risk terrain can be considered sufficiently gratifying as to be an object of an appetite.

Accordingly, the present paper both recognises and advocates for the value which risk appetite offers as metaphorical denotation of practice through which every such 'fight' is conducted. Extending this idea, organisational risk appetite practice can be considered as organisational self-monitoring and self-disciplining which seeks continual cross-referencing between real and possible behaviours and their risk implications on both strategic and operational levels - always seeking performance or competitive advantage and never risk *per se*. Within that context, risk appetite practice can be considered as striving for a behavioural rebalancing through business strategy to allow businesses to embrace more opportunities and encounter fewer threats.

Nonetheless, these nuances of meaning may be wholly absent from corporate risk appetite discourse. This may often express uncritical acceptance of the idea that risk is something to be "embraced" (Rittenberg and Martens, 2012) when present within the risk portfolio that has been selected for its best match with a prescribed risk appetite. This problematic notion that the word 'appetite' within risk appetite makes risk itself an object of desire also arises within various risk appetite definitions provided by the Risk and Insurance Management Society (RIMS, 2012, p. 3). Hence we should be concerned when risk appetite specifications indulge simplistic notions of risk optimality seeking by focusing on requirements to dampen risk-taking to acceptable levels while avoiding over-reaction (Stulz, 2008; Power, 2009; Figner and Weber, 2011), perhaps with an emphasis on being seen to be doing this by markets, credit ratings agencies, regulators and sometimes hostile general publics. Such practice became widespread among financial institutions whose reputations were tarnished in the 2007 financial crisis by accusations of reckless or overly aggressive risk-taking in their sales and trading activities (Li *et al.*, 2013).

Such risk optimality-seeking conceptions of risk appetite can be regarded as seductively emphasising the cultural value of moderation as a reputational reconstruction exercise; hence the common emphasis we see on representing both risk-seeking and risk aversion as dangerous extremes (Aven, 2013a). By equating risk-optimality seeking with moderation-seeking, such views of risk appetite can therefore seem very reasonable. Such perceived reasonableness may further increase by equating risk optimality seeking with achieving competitive differentiation in relation to more conservative or aggressive market players (Tufano, 1996). Reflecting such concerns, risk appetite specifications commonly take the form of limits or boundaries for firm risk-taking along ordinal risk exposure scales, which can then further become a focus for firm governance, shareholder engagement and regulation (Basak *et al.*, 2006; Hoskisson *et al.*, 2016).

Yet important questions remain for such measurement-based approaches. Do they measure overall organisational exposure to financial loss? Do these subsume intangible and non-financial losses, for example those linked to corporate reputation? Do they conceive of loss specifically with reference to shareholder value or do they also consider stakeholder value? Do they also, or perhaps alternatively, subsume all conceivable risk-taking behaviours that might contribute to overall loss exposure? These are very difficult questions likely to divide professional opinion. As soon as the contention is offered that financial loss arising from 'risk-taking' is being measured and estimated, this brings the ontological problem of what 'risk-taking' actually means in the first place (see March and Shapira, 1987; Zinn, 2015). Does this simply include risks identified as being intrinsic to a chosen strategy or set of objectives, which can then form the basis for structured risk assessment processes? Alternatively, are allowances also made for unanticipated behavioural risks such as those associated with hidden recklessness or the hubris of managers, which few are prepared to acknowledge or challenge? Of course, it seems highly unrealistic to expect thorough consideration of the latter, and yet it also seems unwise to neglect them altogether.

A few firms such as MasterCard prefer 'risk exposure appetite' as an alternative to 'risk appetite'. The effect of adding the word 'exposure' is to shift focus onto pure risk as opposed to speculative risk-taking and other risk exposures which arise with managerial behaviour, yet this narrower specification is unlikely to be to the satisfaction of anyone alert to the above questions. It is hard to imagine a credible argument for restricting the concerns of risk appetite within the conceptual straitjacket of pure risk, because this ignores how total organisational loss exposure arises through reflexivity between pure and speculative risk, which continually re-create and transform one another. It is therefore arguable that the complex problem of exactly what the risk appetite mechanism should measure and control is not discussed nearly as often as it should be (Gephart *et al.*, 2009). Tolerance of multiple measurement approaches might best be viewed as buck-passing this problem while failing to recognise the weakness of measurement-based approaches in general.

3. Analytical Framework

Several prominent strands of risk management literature are loosely united by the idea that the things we do to make ourselves safer, such as embedding risk appetite within organisational risk management practices, may create more risk. Target risk theory, sometimes called 'risk homeostasis' or 'risk compensation' theory (Wilde, 1982a, 1982b; Adams, 2001) argues that when we experience some safety intervention, we do not

necessarily permit it to make us safer. Instead, we undertake compensatory risk-taking to match the psychologically preferred 'target' risk-taking level which existed prior to the risk reduction *perceived* to have been created by the safety intervention. Use of this theory for critical scrutiny of organisational risk appetite gives us a plausible line of critical scrutiny, urging consideration that corporate applications of risk appetite might, perversely, stimulate new and concealed forms of corporate risk-taking. This sets us inquiring into precisely what the psychological mechanisms might be. This perspective will prove important throughout the present paper by directing us towards consideration of why managers with discretionary powers to inflict large convert loss exposures upon their organisations may commonly experience motivations to engage in perverse over-compensatory risk-taking in response to efforts at limiting risk-taking.

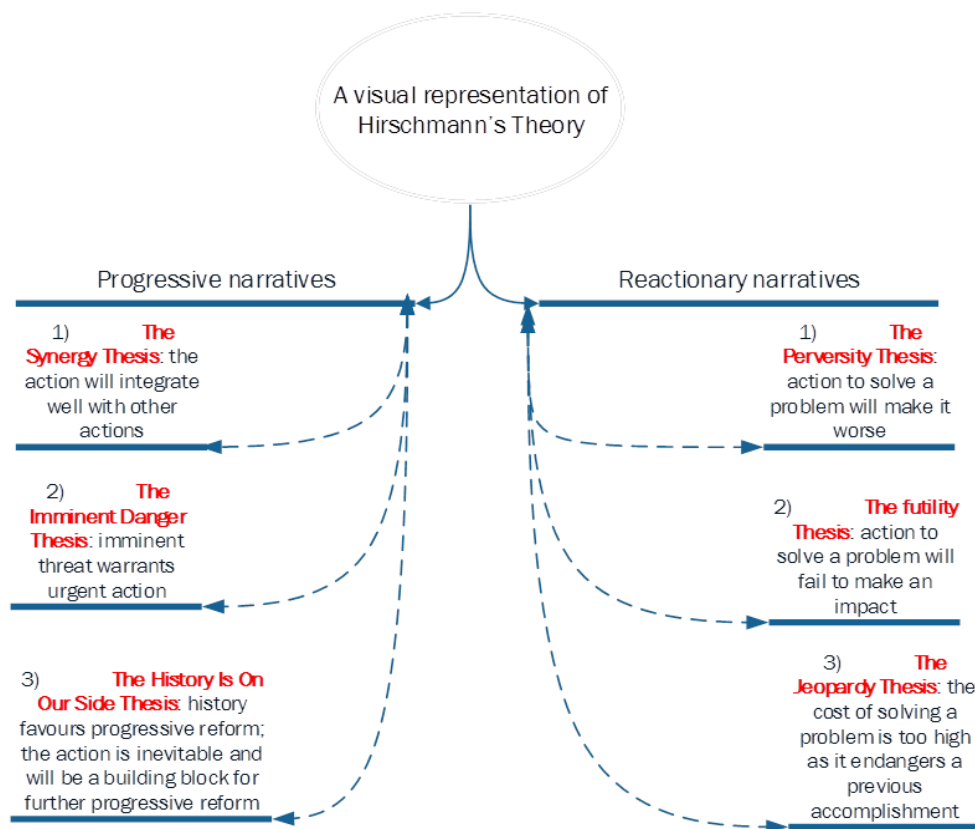
A closely related theoretical consideration is 'social normalisation of deviance' theory, inspired by the Challenger Space Shuttle disaster (Vaughan, 1996). This famously draws attention to the danger of slow and progressive drift from safety or quality standards. Use of this theory to criticise risk appetite delivers up the possibility that upper or lower risk appetite boundaries may not be policed rigorously, particularly where there is controversy and lack of confidence over how risk appetite is measured, or indeed over exactly what is being measured. This possibility will also matter within the present paper because it highlights scope for perverse over-compensatory risk-taking to occur as gameplay at the margins of what is permissible; in other words as boundary-testing edgework behaviour which might defend itself as being not wholly illicit while not being wholly within the spirit of a risk appetite prescription either.

Furthermore, we might also briefly consider the relevance of literature, indebted to organisational psychoanalysis, which is concerned with why organisations often fail to handle uncertainty well (Stein, 2000; French, 2001; Holt, 2004). Such literature explores why, instead of confronting uncertainty, organisations sometimes prefer to wrap themselves in 'cocoon of certainty' (Merry, 2005). This false confidence problem supports a criticism of risk appetite arguing that risk which is anticipated, and whose quantified estimates are then used to measure organisational risk exposure as a basis for prescribing risk appetite, may be a dangerously incomplete subset of the risk to which the firm is truly exposed (Siegrist *et al.*, 2005; Earle 2010). The problem here stems from false confidence in the risk portfolios which managers socially construct with a view to subsequent evaluation using risk appetite. Such social constructions might easily be reverse engineered and then accepted with false confidence to fit risk appetite specifications. This certainly offers scope for organisational

blindness involving denial of many internal risks, including risks arising with strategies set by senior management in general, but also including illicit and perverse risk-taking, in other words words, risks whose acknowledgement and inscription within risk management processes might bring reputational damage, demoralise managers or embarrass leaderships.

These criticisms will be drawn together and arranged more rigorously, and with a concern for balance, within Hirschmann's (1991) framework. To reiterate, the framework was designed to achieve rigorous and balanced critical evaluation of social measures intended to bring about positive change, by looking in turn at various reactionary and progressive narratives that might be applied to them. These narratives are shown in Figure 1.0, below.

Figure 1: Reactionary and Progressive narratives of risk appetite



Each of these six theses offers an analytical narrative useful for theorising the success or failure of risk appetite with respect to various purposes. All three reactionary narratives above refer to “problems” which set us thinking of reckless or excessive risk-taking in particular. Hence, these problems are a key focus throughout the paper. All three progressive narratives set us thinking of risk appetite as a solution given urgent impetus by the recent financial crisis, and yet subject, within its broader context of risk management practice, to continual

revision and improvement. Toward the end of the paper, these will be considered to present a structured view of what might be done to redeem and improve risk appetite despite its many weaknesses.

4. Risk appetite: Implications of detailed guidance

4.1 Developments in ERM

Developments in ERM first brought risk appetite to global prominence as a common-sense risk concept with profound implications for how risk professionals perceive risk and its management (Nocco and Stulz, 2006; Power, 2009; Arena *et al.*, 2010; Hayne and Free, 2014; Bromiley *et al.*, 2015). To better understand risk appetite as a strategic ERM tool, landmark (2004) guidance issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) is important. This high-level abstract guidance established that ERM systems should aspire to do more than control risk, that being the proper role for 'internal control' (see COSO, 1992). Although the guidance remains vague on exact points of difference between ERM and internal control, it is notable that the first objective set by COSO for ERM is not found in its earlier (1992) internal control guidance. This ERM objective is one of allowing the organization to achieve its strategic objectives; that is, its 'high-level goals which align with and support its mission' (COSO, 2004, p. 3). Exactly what this means is ambiguous because internal control might also be said to support high-level goal attainment. However its meaning becomes clearer in the light of the guidance asking entities to 'align risk appetite and strategy' by considering how much risk they are willing to accept when:

- (i) Evaluating strategic alternatives,
- (ii) Setting objectives for whatever alternative is selected as having the optimal risk,
and
- (iii) Engaged in risk control (COSO, 2004, p. 1).

Taking stock, the guidance is therefore commonly read by scholars as exhorting organizations to combine risk management and strategic management practice, such that strategic change itself becomes a risk control mechanism (Lam, 2014; Agarwal and Ansell, 2016). This view is further supported and deepened within the (2017) COSO ERM update guidance which accentuates entity performance review as a spur to both strategic review and ERM review.

Worthy of particular note is that COSO's (2004; 2017) ERM process looks very like a standard cyclical risk management process, moving through key stages of objective setting, risk identification (which they refer to as 'event identification'), risk assessment, response, control, communication and monitoring. However, an important difference between this and most other cyclical risk assessment processes is an 'internal environment' stage, which seeks to ensure the cultural tone is appropriate for further embarking on such cyclical processes. In the (2017) ERM update guidance in particular, a supporting 'principle' of 'governance and review' is further introduced which covers defining and demonstrating commitment to the desired culture, looking to human relations management practice in particular as a means to achieve this..

Interestingly, although once more ambiguously, the 'internal environment' stage of the ERM process cycle is regarded as entailing some consideration of how risk is 'viewed and addressed by risk appetite' (COSO, 2004, p. 3) which can be construed as a recognition that a healthy cultural context for effective risk management practice is one where people have a healthy critical attitude towards risk appetite itself. Impositions of risk appetite can therefore be understood, in part, as levers for behavioural change which simultaneously test and steer the risk cultures of organisations, with active support from the human relations function (see also Kimbrough and Compton, 2009).

4.2 Role of risk appetite within ERM philosophy

Viewed within the above guidance context, the role of risk appetite within ERM philosophy becomes clearer. Whereas the traditional approach to risk management is based on a logic of matching risks to controls within what are simultaneously risk management process and internal control activities, ERM philosophy shifts focus to a rather different logic of risk appetite-driven strategic choice (Drew, 2007; Bromiley *et al.*, 2015). This enhances strategy processes by introducing some formalised risk sensitivity and engineered cultural preference at strategy process stages. In this way risk appetite can be viewed as a high-level portfolio of controls linked to – and even culturally bound to – particular strategies, which Boards and shareholders can apply, and whose impositions in part constitute reflexive cultural steering within the organisation to expedite more effective risk management. It has been observed in the literature (Dickinson, 2001; Gatzert and Martin, 2015), that due to this control pressure, enterprise risk managed within the entity may equal or come close to enterprise risk as perceived by financial markets. By extension, it follows that any cultural steering enacted through the risk appetite mechanism might be expected to steer towards matching the hopes

and fears, which shareholders harbour for the risk cultures of their investee firms. This, in other words, may be a key determinant of risk appetite preference.

Use of risk appetite as a discipline upon strategy might then entail each strategic decision involving selection between hypothetical future strategic risk portfolio options with culturally engineered and shareholder sensitive risk appetite strongly influencing choice (Clarke and Varma, 1999; Nair *et al.*, 2014). For reasons given above, such exercises might make some provision for realism towards whether an existing risk culture, comprising a particular approach to behavioural risk-taking, is sufficiently adaptable to the imposition of a new risk appetite, particularly where such a risk appetite might be perceived as culturally alien and not a true reflection of what actually goes on within an organization. Following up once the preferred strategy has been adopted, ongoing operations might then be scrutinised for consistency with the new risk appetite to establish whether sufficient cultural adaptation to new strategic circumstances has taken place, until such times as the risk appetite is deliberately adjusted once more and/or there are further strategic changes guided by risk appetite. These circumstances invite a dualistic view of risk appetite emphasising an internal tension. On the one hand risk appetite is intended to resolve down and express organisational proclivity to follow a particular strategic path. On the other hand it still aspires to occupy a policing role only possible through critical perspectives upon such proclivity. Given this essential tension, it follows that for risk appetite to be successful it needs to make provision for critical review of itself, which is sensitive to the various pressures which can shape it, and whose consequences might include the initiation of wholly new conversations about the strategic directions organizations take. This notion that risk appetite can serve as an initiation point for an organisation's imaginative self-reflection and possible self-reinvention, of course underscores the need for academic guidance providing basic terms for critical awareness and review of risk appetite.

A more basic challenge for anyone seeking to use risk appetite discourse for any purpose is that of articulating actual risk (see for example Kaplan and Garrick, 1981; March and Shapira, 1987; Hansson, 2004, 2010; Althaus, 2005; Campbell, 2006; Aven and Renn, 2009; Boholm and Corvellec, 2011; Aven, 2013b; Marshall and Ojiako, 2013), hypothetical future risk linked to strategic options (Miller and Waller, 2003), and thereafter risk appetite itself at entity level (Dupoy, 2009; Hillson, 2012; Aven, 2013a; Hassani, 2015). Arguably, from the literature (Williams, 1994; Patterson and Neailey, 2002; Agarwal and Ansell, 2016), the strategic risk register mechanism is useful for the first two of these tasks. Yet risk registers according to Budzier (2011) have serious flaws, not least of which is their

tendency to articulate whatever patchy and socio-technically driven impression of risk is favoured within the organisation, often neglecting internally generated risks which ought to matter greatly to any control mechanism concerned with 'risk-taking'. Moreover, what they contain can only ever be as insightful as the firm's capacity for entity-wide risk assessment allows them to be. Before actual risk can be articulated at entity level, ERM programme leadership must be successful in energising and empowering managers across the entity to liaise spontaneously and with candour and foresight, to generate and transmit the risk information needed for dynamic strategic risk register maintenance. To articulate hypothetical risk, senior management sometimes participate within scenario exercises (Liebenberg and Hoyt, 2003; Miller and Waller, 2003; Amer *et al.*, 2013). However, on occasions, they may regard such exercises as inappropriate calls on their time.

Hence there will always be considerable scope for doubting how well the resulting strategic risk register contents match the real and hypothetical risk environments they purport to match. Moreover such doubts must intensify with entity complexity, pace of change for the entity and its environment, the likelihood of partial risk blindness arising with socio-technical misrepresentation of risk, and various other infrastructural and procedural weaknesses that can compromise entity-wide risk management competency. Not least among these weaknesses germane to risk registers themselves is the practice where risks corresponding to complex possible futures are reductively expressed as single point estimates within probability-impact grids. Hence comparison between current and alternative future risk portfolios articulated in risk register format can be a highly problematic basis for risk-appetite informed strategic choice..

4.3 Influence

Commonplace practitioner views of how ERM programmes can reshape strategic management have nonetheless emerged under the influence of guidance exhorting use of real and hypothetical risk registers for strategic decision-making. It is important to view such advocacy as often motivated insofar as it reflects the Risk Manager's ambition to win a place at the top management table (Aabo *et al.*, 2005; Lee and Shimpi, 2005; Mikes *et al.*, 2010). Of course, micro-political conflict may arise if other managers seated at that table become antagonistic towards what they perceive as the Risk Manager's empire building ambition of colonising the strategic management process with risk management techniques such as sometimes flawed risk registers. An important question arising here is whether some wilful risk blindness has arisen with the success of 'empire building through ERM' strategy

employed by the risk management profession. Rendering strategic choice dependent on risk appetite implies that strategic decision-makers faced with strategic alternatives should, to some extent at least, subordinate strategic management processes and techniques perhaps developed over decades, to the highly problematic activity of estimating the risk portfolio for each alternative, in order to then establish which offers more value on a risk-adjusted basis. This entails enjoyment of a great deal of strategic influence for whoever purports to be offering sharp, accurate and thorough risk estimates at high confidence levels, thus creating powerful motives for exaggerating such claims.

A further contribution to our understanding of risk appetite can be drawn from the RIMS (2012) report that tabulates definitions of risk appetite against various articulations of risk 'tolerance'. Here, 'risk tolerance' implies 'what the organization can afford to lose' (IRM, 2011, p. 12). This definition of 'risk tolerance' has intuitive appeal because it sets us thinking that risk tolerance can be greater or less than the level of risk the entity is willing to take. This becomes an important possibility when we consider that risk appetite can be based on shareholder value, reflecting shareholder preferences, which may or may not be aligned well to the objective reality of the entity's capacity to withstand risk. Hence, we see the relationship between risk appetite and risk tolerance can hold considerable importance for the politics of corporate governance.

However, the RIMS report does not proceed in that vein. Instead makes an alternative suggestion to regard risk appetite as a high level business model concept pertaining to the *total* risk exposure associated with a particular strategic position; risk tolerance, by contrast, then relates to how risk appetite is experienced by managers as risk controls (RIMS 2012, 3), for example as imposed limits or thresholds that discipline risk-taking behaviour. Hence, risk tolerance is more likely to be established on operational levels, for business units or perhaps for individual managers (Kwak and LaPlace, 2005). It is also more likely to be expressed in clear quantitative terms, perhaps linked to performance measures, or in qualitative terms as outcomes that will not be tolerated (Hanna and Chen, 1997). Taking this view, risk tolerance equates to top-down risk-taking preferences set within guidance spanning rules and other imperatives, which are meaningful as cultural engineering interventions, strongly or softly conditioning all managers do to vary organisational risk exposures. Hence, whereas risk appetite is a term intended to render the strategic imagination more risk sensitive, risk tolerance is simultaneously a budgetary term and a risk culture engineering term of more operational significance, seeking to remediate risks arising with chosen strategies. Juxtaposing the above views, we might conclude that the concept of risk tolerance, where it

lacks clarity in its relationship to risk appetite, becomes a problem for risk practitioners concerned to develop clear organisational narratives of risk appetite. Risk tolerance offers opportunities for developing these to consider the politics of corporate governance, or the operationalisation of risk appetite through tangible forms of behavioural or cultural modification, but not both simultaneously.

At this juncture it is worth adding a further complicating factor which might easily obstruct such narratives. Just as we tend to conceive of multiple (as well as complex and sometimes overlapping) sub-cultures within organisations (Hofstede, 1998; Thorne, 2000; Marrewijk, 2016), so too we can conceive of risk appetite as varying with diverse roles and levels of seniority across entities. Guidance on risk appetite often differentiates entity level risk appetite from lower level forms, taking the view that lower level risk appetites can be more generous with risk-taking allowances than higher-level ones. Chapter five of HM Treasury's (2004) 'Orange Book' illustrates this well. Its taxonomy of corporate, delegated and project forms of risk appetite has been widely used across UK public services. An important implication here is that the further a manager ascends the corporate ladder, the more they are likely to experience risk appetite as a constraint. Such constraints may be unwelcome by appearing to challenge risk-taking practices which have worked well for managers in the past. Hence this problem might explain some covert organizational resistance to risk appetite at higher management levels in particular.

5. The glamour and excitement of risk

The previous section has problematized the metaphorical notion of "embracing risk" which is often explicit within risk appetite guidance and philosophy. The problem is worth some further elaboration here because closer attention to it can help us to understand why specifications of risk appetite may be likely to fail within organisations. We will see that there is some irony in the discussion below. On face value, the notion that we should embrace risk (rather than de-risk wherever possible) may appear dangerous, and yet it reflects a profound truth and reality relating to managerial identities, career aspirations and even rich, life-affirming organisational experiences, that we must consider to more fully appreciate why specifications of risk appetite may often fail. These arguments will pertain particularly to firms where what we might term cultural and behavioural (rather than prescriptive) 'appetites for risk' can be considered deeply embedded within the identities and career aspirations of managers, and indeed in the activities they undertake in their workaday lives (London, 1983; Mishina *et al.*, 2010; Berger *et al.*, 2014).

The 'appetites' in question have been of particular interest to scholars such as Bebhuk and Spamann (2009), Crotty (2009) and Sharma (2012) who are interested in excessive corporate risk-taking in US financial services. According to Ojiako *et al.* (2012) and Marshall and Ojiako (2015) some common strands within risk sociology help us to theorise what is at issue. The notion of 'edgework' articulated by Lyng (2005), reminds us that voluntary risk-taking often seeks psychological payoffs from exploring cultural boundaries, particularly through risky transgression. Here we might certainly consider the predicament of the manager constrained by risk appetite, particularly where there is ambiguity related to the specification and /or opportunity to engage in some risky activity whose level of risk is ambiguous. Writing of 'edgework' within financial trading activities in particular, Smith (2005) emphasises that much of the thrill associated with voluntarily entering a non-routine and risky environment relates to the maintenance of feeling 'in control'. This is likely to be a particularly powerful experience for those for whom pre-existing locus of control conflicts are salient. Lyng and Matthews (2007) add that edgework is also often characterised by hyperrealist feelings of full immersion in the present moment, which can seem life affirming and inject powerful meaning into what might otherwise be a dull working day.

Clearly, then, the notion that we can have an appetite for risk is insightful, because for many managers with discretionary powers to bring risk upon themselves, a multitude of psychological pay-offs may provide motivation. The validation of professional identity certainly deserves consideration as one of these payoffs. Arguably, careers in finance appear glamorous to many because they offer a means to cultivate professional identities visualised to involve thriving within highly uncertain and volatile environments, and taking risks with fearlessness. To gain employment within a financial institution, and to then find risk-taking constrained by a specification of risk appetite, might therefore prove deeply frustrating. It might be perceived both as an obstacle to flourishing within the firm and as a subliminal attack on the very identity from which the manager derives both personal and social identity, in other words, feelings of self-worth. Linking the concept of edgework to professional identity, then, we find what may sometimes be an important source of internal resistance within organisations to impositions of risk appetite, the consequence of which may sometimes be to produce silent understandings among managers that risk appetite specifications represent merely a public-facing facade masking some organizational practices.

6. The cultural problem: imprudence, corruption and concealment

This section further considers what negative impacts specifications of risk appetite may have, this time with reference more specifically to cultures within financial firms, which might reasonably be described as risk-seeking cultures. The key claim made in this section is that such risk-seeking cultures may often express a particular behavioural pattern, deeply rooted in personality, which seems to be intensifying in advanced post-industrial societies and growing salient in corporate cultures. Crucially, this pattern comprises motivations aptitudes and beliefs that, taken together, are likely to fuel not just risk-taking in general but socially aversive, covert forms of risk-taking which are hostile to risk appetite specifications. . The psychological elements which combine to produce this intensifying behavioural pattern have been studied within literatures on Machiavellianism, psychopathy and narcissism (the so called 'dark triad'). Studies by Crysel *et al.* (2013) and Jones (2014) suggest that these behavioural patterns are correlated to 'risk-seeking cultures' and their study may provide a clear framework for understanding important psychological complexities within organizations. Importantly, narcissism can also be implicated in myopic risk-taking. Marshall *et al.* (2013) tried to clarify the excessively short-termist mentality of the dark triad pattern with reference to the view that the risk-seeking behaviour associated with narcissism is likely to be characterized by unusually desperate, anxious and combative feelings and attitudes towards others such as those (here we surmise) who impose risk appetite constraints on the personal targets and other goals they feel they need to meet in order to advance in their careers.

This paper draws particular attention to the 'dark triad' of Machiavellianism, psychopathy and narcissism as a cultural blueprint for understanding corporate cultural problems of excessive risk-seeking in the modern world for a particular reason. These three behavioural patterns are united by mounting evidence suggesting that *all three* continue to co-intensify within general populations and corporations (Marshall *et al.*, 2013; Marshall *et al.*, 2015). Moreover, there is growing academic opinion and evidence highlighting corporate psychopathy as salient within financial institutions in particular and even culpable for producing the 2007-2008 global financial crisis (Boddy *et al.*, 2010; Boddy, 2011, 2014; Marshall *et al.*, 2014). In particular, it is also useful to consider Boddy's (2010) finding that corporate psychopathy appears to be most heavily concentrated in the 'finance, insurance, banking and communication' sectors.

Marshall *et al.* (2015, p.497) attempted to simplify the problem brought by intensification of these three behavioural patterns within broad social and corporate culture

by conceiving of a 'general problem' of 'corruption', 'imprudence' and 'concealment'. Here, 'corruption' refers to "preoccupation with self-aggrandisement, indulged through malfeasance, in the absence of a moral compass to regulate behaviour". Hence, it covers a multitude of scandalous and/or illegal activities which have harmed the reputations of global banks during the last few years, such as insider trading, rigging interest rates in order to manipulate derivatives markets, failure to report true risk exposures that arise from participation in derivatives markets, or even mass bank miss-selling of mortgages, or indeed forms of insurance such as payment protection insurance which unwitting bank customers either did not need or did not know they were being sold.

Within that broad context of 'corruption', the significance of 'imprudence' is that it entails a willingness to enter into and then persist with all such practices without regard to any longer term consequences, be they financial, emotional or reputational. Here it is important to appreciate that the concept of 'prudence' includes elements of both candour and mindfulness which are useful for enhancing conceptions of healthy risk culture (Marshall, 2016). Arguably it makes most sense as a capacity (some might call it a virtue, or a habit of mind and will) which permits the thinking subject to mentally extricate herself from the behavioural flow within a corporate culture, to an extent which is sufficient to allow some critical and/or ethical thought to be brought to bear. Hence it may be 'prudent' to blow the whistle on some short-termist cultural/behavioural practice which fails to consider important long term outcomes; yet it might equally be prudent to blow the whistle on some long-running cultural/behavioural practice that is failing to consider important short term outcomes. Setting their theory within this context of uncritical immersion within some rogue behavioural practice (which is arguably a key consideration when understanding excessive risk-taking as a social phenomenon within organisations), Marshall *et al.* (2013) conceived 'imprudence' within the Machiavellianism, psychopathy and narcissism behavioural patterns as psychological failure to make good inter-temporal trade-offs between short and long term objectives.

The third constituent of Marshall *et al.*'s (2013) 'general problem' is 'concealment'. This refers in particular to the charisma and dramaturgical skill which narcissism in particular contributes to the dark triad behavioural patterns. What this 'general problem' contains, then, is a rogue behavioural pattern where corruption supplies socially aversive motive: a willed pursuit of particularistic interests that is contemptuous of constraints placed upon it; imprudence supplies a lack of mindful awareness of the consequences of 'corruption', particularly where this takes social form amongst groups of like-minded rogue individuals

who coalesce within socially aversive, private counter-cultures; and lastly ‘concealment’, comprising various dark triad skills and aptitudes which many associate with strong and/or reassuring management styles, which allows these rogue practices to evade or delay detection long enough for them to play through to sometimes disastrous end games.

What this section has provided, then, is a view of risk-seeking culture where we might expect to find risk appetite experienced as a hostile and unwelcome intervention, perhaps succeeding by dampening some overt risk-seeking yet simultaneously failing by stimulating new covert forms of risk-seeking. We do not suggest that all risk-seeking cultures are like this. We might consider that Levenson (1990), for example, differentiates between ‘antisocial risk takers’, ‘adventurous risk takers’ and ‘prosocial risk takers (or ‘heroes’). This clearly illustrates that high risk seeking can emerge and be ethically characterized through semantic framing in very different ways.

Consideration of the many scandals that have affected global banks in recent years (Boddy, 2011; Marshall *et al.*, 2013), does however lend plausibility to our suggestion that these strongly clustering Machiavellianism, psychopathy and narcissism behavioural patterns should be taken seriously as a psycho-cultural problem for risk appetite within financial institutions. As a final word on this theory’s plausibility it is worth adding evidence suggesting that “at least one major Investment Bank... used psychometric testing to recruit social psychopaths because their characteristics exactly suited them to senior corporate finance roles” (Basham, 2011). This may serve as a stark reminder that it may be very difficult for organisations to cherry-pick adaptive upside within risk-seeking personality without also importing a sinister downside, which risk appetite mechanisms may be failing to recognise and tackle.

7. Discussion: Pro and contra risk appetite

Hirschmann’s (1991) *futility thesis* raises the possibility that risk appetite may fail in its express purposes. It has been argued accordingly that risk appetite can be a thought-provoking metaphor capable of introducing more risk sensitivity into deliberation on strategy, and on the politics of corporate governance – and yet grounds have also been provided above for suspecting that lack of clear understanding and an unfortunate category error may often prohibit effective use of the metaphor within these contexts. This seems like a valid futility argument. An even better futility argument has pertained to weakness of, and likely confusion surrounding, quantitative approaches to risk appetite purporting to base preferred risk (exposure and/or risk-taking) on measured risk (exposure and/or risk-taking). The problem

here is ongoing complex and hard-to-anticipate reflexivity between risk exposure and risk-taking which entails it is unwise to separate management and measurement of each. Where risk-taking is sufficiently visible as to be quantified in such a way that it can be factored into the total sum of risk exposures arising within some strategic risk portfolio, it could be argued that risk appetites can be expressed and adjusted quantitatively to contain risk-taking within preferred limits. However, prospects for this are always likely to remain poor. Anticipated risk is always likely to remain a subset of total risk – which is a key reason why the cultivation of resilience to manage the unexpected has become immensely important to the risk profession in recent years.

A well-known illustration of poor prospects for aspiring to full acknowledgement of risk exposures arising with behavioural risk-taking, is as follows. During the early 2000s, the HBOS Bank, based in the UK, was threatened by risk exposures from rapid growth in financial product sales. This led to a conflict between senior management at the Bank and the Bank's Head of Group Regulatory Risk, Paul Moore, whose reporting of this growth to be unsustainable led ultimately to his dismissal and his signing of a court gagging order (Smallman *et al.*, 2010). The problem here was risk-taking whose associated dangers the firm refused to suppress because of its profitability.

The *perversity thesis* takes root very easily in the foregoing. Insofar as risk appetite is blind to a behavioural problem, that problem can thrive, particularly where risk appetite is expected to serve as the primary or sole mechanism for tackling the problem. Furthermore it has been explained that risk appetite might spark covert and illicit risk-taking, particularly where the risk appetite specification appears unrealistic, incompetent at what it purports to measure or achieve, or as a deeply frustrating constraint on discretionary power, innovation, career aspiration and business success.

Applying Hirschmann's (1991) *jeopardy thesis* establishes a further valuable line of inquiry calling attention to possibilities that risk appetite may jeopardise other post-financial crisis gains made in risk management practice. It is commonly said that the new era of financial austerity and toughened risk governance ushered in by the financial crisis has amounted to "a revenge of the risk guys" (ACCA, 2010, p. 12); more specifically the focus of risk management effort has been on 'tempering the pursuit of profit' by rebalancing risk with reward so as to turn profit seeking from being brittle (i.e. unsustainable) into 'something stronger', that is sustainable (ACCA, 2010, p. 1). In speaking directly to this need for rebalancing, risk appetite powerfully articulates the post-financial crisis global risk management agenda – and so much of risk management's reputation rests with what

essentially amounts to a highly problematic grand metaphor. Perhaps the main jeopardy issue arising relates to use of this metaphor as a strategic management tool; specifically, owing to its many problems it may actually harm and frustrate the risk management profession's agenda of colonising strategic management with risk management techniques. This may taint risk management advocacy of much better strategic management techniques that are useful for cultivating resilience or healthy risk cultures, or for making better decisions under uncertainty. Such tainting may reduce senior management preparedness to consider using scenario workshops, decision theory, Monte Carlo simulation and many highly specific forms of risk analysis whose mettle has been tested by decades of academic scrutiny, unlike risk appetite itself.

Accordingly, an influential critique of ERM by Power (2009) accuses risk appetite of bringing risk management into disrepute. He contends that an 'impoverished conception' of risk appetite lay at the heart of ERM's 'intellectual failure' during the financial crisis. One of his main criticisms is that risk appetite has proven incapable of articulating business critical risks, and that it has been blind, in particular, to their interconnectedness. An important implication of this line of criticism is that risk appetite is highly unsuitable as an organizational 'thermostat' for monitoring and adjusting strategy, and therefore not what the risk manager needs to win and keep a place at the strategic management table. Instead, Power (2009) argues that risk appetite may contribute positively to risk management practice if it refocuses from financial capital to human behaviour, essentially becoming a 'process' for influencing the complex behavioural ecologies within financial institutions - as indeed is congruent with the present article's argument that the risk appetite metaphor can unlock a rich appreciation of relationships between risk, strategy, culture and governance, *if used well*. Of course, risk appetite's failure as a plausible measure of risk and/or risk-taking jeopardises this.

The above criticism leads us directly to consider Hirschmann's (1991) *synergy thesis*. Power's (2009) of risk appetite as a risk thermostat for strategy entails that it may confuse and mislead on what synergising risk infrastructure, such as strategic risk registers, can achieve. Clearly, such devices provide simple visual displays alerting managers to important issues and how they can be/are being addressed. There is surely some value in using these to match risks to *ex ante* and *ex post* controls, and to show who is accountable, as well as circumstances and available resources where risk control actions have delegated authority. Further productive synergies become apparent when we consider risk appetite as detailed specifications of risk tolerance for guiding management behaviours. This helps us to

appreciate further that risk appetite can be theorised as synergising with – or indeed as being an umbrella term for – various tangible risk management control measures that directly seek to influence behaviour (Woods 2009). These include initiatives to dampen aggressive selling through the imposition of stricter codes to treat customers fairly, broader cultural or ethical initiatives emphasising qualities such as mindfulness, candour and personal integrity, all of which may help suppress covert risk-seeking. Such interventions are usually considered under the umbrella heading of risk culture – yet perhaps risk appetite is a better umbrella term for drawing together a more enlightened and realistic discourse on problems that need to be tackled in relation to preferred and actual risk behaviour.

Hirschmann's (1991) *imminent danger thesis* holds that crisis creates popular demands for strong and urgent remedial action. This sets us thinking of the regulatory storm whipped up by the financial crisis and the time-limited window of opportunity it has created for bringing new risk management initiatives to bear. When viewed from a history of ideas perspective, enterprise risk management and risk appetite are both extremely youthful concepts, having emerged only as recently as the early 1990s within large financial institutions. Hence, they have had very little time to carve their niches. The post-financial crisis interest in developing risk appetite as a cultural/behavioural rather than purely financial constraint should also be considered in the light of the fact that academic and practitioner interest in risk culture, and risk management culture, is even newer (Power *et al.*, 2012; Roeschmann 2014; Shinkman and Herd, 2014; Mehran, 2016; Ring *et al.*, 2016). Power *et al.*, (2012) for example charts a proliferation of literary output on risk culture since the global financial crisis of 2007-2008. This literature cannot as yet agree on whether risk culture equates to the cultural footprint of the risk management function in particular, or of the organization more generally, or indeed various subcultures therein. However, Power *et al.* (2012) claim that large firms are increasingly looking to risk management departments to lead wholesale cultural redesign. Such efforts often look to risk cultures as 'carriers of organisational ethics'. They add that such change programmes are sometimes undertaken along 'ethics based' rather than 'incentivisation' lines. An important consideration then, is that risk appetite and risk culture have entered the corporate stage as urgently required remedies – and yet both seek behavioural modifications often at odds with existing and deeply engrained cultures, and which may conceivably take years or even generations to change. There is an aspect of perversity here: both reflect ambitions for short-termist gain which count among the cultural problems that necessitated them to begin with. To conclude, then, the *imminent danger* thesis serves us well by alerting us to this issue.

Is history on the side of risk appetite, as Hirschmann's (1991) sixth narrative might lead us to consider? Perhaps history is instead very strongly on the side of the cultural problem, underlying covert risk-taking, which risk appetite prescriptions in their present forms are simply not addressing. This paper's criticism of risk appetite ultimately derives most of its force from the theoretical premise suggesting that a toxic combination of Machiavellian, narcissistic and psychopathic psycho-cultural patterns is inexorably on the rise both within advanced post-industrial societies generally and within particularly large financial corporations. To be clear, we should not be surprised that risk appetite debate is not addressing this cultural problem, because even the thriving risk culture debate which has emerged from the financial crisis is characterised by a surprising lack of concern for the true psycho-cultural aetiologies for excessive risk-taking.

8. Conclusion

This paper has offered a critical review of risk appetite intended to help senior management practitioners both challenge and extract more value from the risk appetite metaphor. Notably, this concern also leads us to emphasise the need for organisations to develop greater understanding of any psycho-cultural problems they have pertaining to risk-taking. Accordingly we urge wider consideration of how critical review of risk appetite within organizations might very often fail to acknowledge Marshall et al.'s (2015, p. 497) 'general problem' of 'corruption', 'imprudence' and 'concealment' which may become highly aggravated wherever risk appetite is experienced as an unwelcome imposition. Perhaps a fundamental reason why corporate risk appetite specifications and associated cultural change efforts have failed to recognise and engage with these cultural problems is that they have arisen within dark triad cultures, such that they also manifest their deficiencies to some extent. IN particular they might often reflect the common sense of the financial professional who seeks and demands evidence that investments of time, money and effort are succeeding in creating shareholder value over the short to middle term. It is particularly interesting to consider that the (2017) COSO ERM update guidance might now inadvertently aggravate this problem through all it does to tighten the links between strategy, risk management and 'performance', the latter of course inviting inherently short-terminst views.

Yet organizational use of risk appetite cannot succeed on the same timelines as performance management and measurement. Healthy cultures take time to grow and dysfunctional cultures often take time to turn around. Hence, when setting risk appetite specifications, arguably much more consideration should be given to the benefits of using

risk appetite discourse to express a historical consciousness which recognises the folly of false confidence in short term cultural re-engineering solutions.

Thinking from this more enlightened – and prudent – standpoint, the cultural problems giving rise to recklessness within organizations are more likely to appear intractable, and perhaps even intensifying year on year. Correspondingly, effort to tackle these problems based on ongoing critical review of risk appetite can be viewed much more healthily and realistically as team effort required right across organizations, and moreover as effort which needs to be relentless and innovative for at least decades to come. The development of risk appetite as a behavioural concept, applied in conjunction with as many synergising levers for cultural change as can be assembled, clearly has a long way to go and can perhaps only expect partial, yet still very worthwhile, success. Naming the cultural problems which need to be tackled will be a sensible start. Risk appetite will become a more useful metaphor when its meaningfulness within organizations incorporates an appreciation of the need to focus relentless ongoing effort on tackling these problems.

References

- Aabo T, Fraser J, and Simkins B (2005) The rise and evolution of the chief risk officer: enterprise risk management at Hydro One. *Journal of Applied Corporate Finance* 17(3): 62-75.
- Althaus C (2005) A Disciplinary Perspective on the Epistemological Status of Risk. *Risk Analysis* 25(3): 567–588.
- Amer M, Daim T, and Jetter A (2013) A review of scenario planning. *Futures* 46: 34 - 40.
- Association of Chartered and Certified Accountants (ACCA) (2010) *Risk and Reward: tempering the pursuit of profit*. Pub. Accountants for Business Programme, ACCA.
<http://www.accaglobal.com/content/dam/acca/global/PDF-technical/corporate-governance/tech-afb-rar.pdf>, accessed August 27, 2015.
- Adams J (2001) *Risk*. Routledge: Abingdon.
- Agarwal R and Ansell J (2016) Strategic Change in Enterprise Risk Management. *Strategic Change* 25(4): 427-439.
- Aven T, and Renn O (2009) On risk defined as an event where the outcome is uncertain. *Journal of Risk Research* 12(1): 1-11.
- Aven T (2013a) On the meaning and use of the risk appetite concept. *Risk Analysis* 33(3): 462-468.
- Aven T (2013b) Practical implications of the new risk perspectives. *Reliability Engineering and System Safety* 115: 136-145.

- Basak S, Shapiro A and Tepla L (2006) Risk management with benchmarking. *Management Science* 52(4): 542-557.
- Basham B (2011) *Beware corporate psychopaths—they are still occupying positions of power.* www.independent.co.uk/news/business/comment/brian-basham, accessed August 27, 2015.
- BCBS (2013). *Principles for effective risk data aggregation and risk reporting.* Basel Committee on Banking Supervision, Basel. <http://www.bis.org/publ/bcbs239.pdf>, accessed May 14, 2016.
- Bebchuk L and Spamann H (2009) Regulating bankers pay. *The Harvard John M. Olin Discussion Paper Series* No. 641.
- Berger A, Kick T, and Schaeck K (2014) Executive board composition and bank risk taking. *Journal of Corporate Finance* 28: 48-65.
- Boddy C, Ladyshevsky R, and Galvin P (2010) The Influence of Corporate Psychopaths on Corporate Social Responsibility and Organizational Commitment to Employees. *Journal of Business Ethics* 97(1): 1-19.
- Boddy C (2011) The corporate psychopaths theory of the global financial crisis. *Journal of Business Ethics* 102(2): 255-259.
- Boddy C (2014) Corporate Psychopaths, Conflict, Employee Affective Well-Being and Counterproductive Work Behaviour. *Journal of Business Ethics* 121(1): 107-121.
- Boholm A and H. Corvellec H (2011) A Relational Theory of Risk. *Journal of Risk Research* 14 (2): 175 - 190.
- Bromiley P, McShane M, Nair A and Rustambekov E (2015) Enterprise risk management: Review, critique, and research directions. *Long Range Planning* 48(4): 265-276.
- Budzier A (2011) The risk of risk registers—managing risk is managing discourse not tools. *Journal of Information Technology* 26(4): 1-3.
- Campbell S (2006) Risk and the subjectivity of preference. *Journal of Risk Research* 9 (3): 225-242.
- Clarke C and Varma S (1999) Strategic risk management: the new competitive edge. *Long Range Planning* 32(4): 414-424
- Committee of Sponsoring Organizations of the Treadway Commission (COSO) (1992) *Internal Control - Integrated Framework.* AICPA: New York.
- Committee of Sponsoring Organizations of the Treadway Commission (COSO) (2004) *Enterprise Risk Management - Integrated Framework.* COSO.
- Committee of Sponsoring Organizations of the Treadway Commission (COSO) (2017) *Enterprise Risk Management: integrating with strategy and performance.* COSO.

- Crotty J (2009) The Bonus-Driven “Rainmaker” Financial Firm: How these firms enrich top employees, destroy shareholder value and create systemic financial instability. *PERI Working Paper Series* Number 209.
- Crysel L, Crosier B and Webster G (2013) The Dark Triad and risk behaviour. *Personality and Individual Differences* 54(1) pp.35-40.
- Dagdeviren H, Lund-Thomsen P and McCann L (2016) Multiple paths through the complexities of globalization: The next three years of Competition & Change. *Competition & Change* 21(1): 3–9.
- Dickinson G (2001) Enterprise Risk Management: its origins and conceptual foundation. *The Geneva Papers on Risk and Insurance* 26(3): 360-366.
- Drew M (2007) Information risk management and compliance - expect the unexpected. *BT Technology Journal* 25(1): 19-29.
- Dupoy P (2009) Pure indicator of risk appetite. *Australian Economic Papers* 48(1): 18-33.
- Earle T (2010) Trust in Risk Management: A Model-Based Review of Empirical Research. *Risk Analysis* 30(4): 541-574.
- Figner B and Weber E (2011) Who takes risks when and why? Determinants of risk taking. *Current Directions in Psychological Science* 20(4): pp.211-216.
- Financial Stability Board (2014) *Guidance on Supervisory Interaction with Financial Institutions on Risk Culture: a framework for assessing risk culture*. <http://www.financialstabilityboard.org>, accessed February 2, 2015.
- Figner B and Weber E (2011) Who takes risks when and why? Determinants of risk taking. *Current Directions in Psychological Science* 20(4): 211-216.
- French R (2001) Negative capability: managing the confusing uncertainties of change. *Journal of Organizational Change Management* 14(5): 480-492.
- Gatzert N and Martin M (2015) Determinants and value of enterprise risk management: empirical evidence from the literature. *Risk Management and Insurance Review* 18(1): 29-53.
- Gephart R, Van Maanen J and Oberlechner T (2009) Organizations and risk in late modernity. *Organization Studies* 30(2-3): 141-155.
- Grace M, Leverty J, Phillips R and Shimpi P (2015) The value of investing in enterprise risk management. *Journal of Risk and Insurance* 82(2): 289-316.
- Hanna S and Chen P (1997) Subjective and objective risk tolerance: Implications for optimal portfolios. *Financial Counseling and Planning* 8(2): 17-26.
- Hansson S (2004) Philosophical perspectives on risk. *Techné: Research in Philosophy and Technology* 8(1): 10-35.

- Hansson S (2010) Risk: objective or subjective, facts or values. *Journal of Risk Research* 13(2): 231-238.
- Hassani B (2015) Risk Appetite in Practice: Vulgaris Mathematica. *The IUP Journal of Financial Risk Management* XII (1): 7-22
- Hayne C and Free C (2014) Hybridized professional groups and institutional work: COSO and the rise of enterprise risk management. *Accounting, Organizations and Society* 39(5): 309-330.
- Hillson D (2012) Using risk appetite and risk attitude to support appropriate risktaking: A new taxonomy and model. *Journal of Project, Program and Portfolio Management* 2 (1): 29-46.
- Hirschmann A (1991) *The Rhetoric of Reaction: perversity, futility, jeopardy*. Harvard University Press: Cambridge, MA.
- HM Treasury (2004) *The Orange Book: Management of risk - Principles and concepts*. HMSO: London.
- Hofstede G (1998) Identifying organizational subcultures: An empirical approach. *Journal of Management Studies* 35(1): 1-12.
- Holt R (2004) Risk Management: the Talking Cure. *Organization* 11 (2): 251-270.
- Hoskisson R, Chirico F, Zyung J and Gambeta E (2016) Managerial Risk Taking: A Multi-Theoretical Review and Future Research Agenda. *Journal of Management, In Press*.
- Institute of Risk Management (IRM) (2011) *Risk Appetite and Tolerance. A guidance paper from the Institute of Risk Management*. Pub. Institute of Risk Management.
- Jones D (2014) Risk in the face of retribution: Psychopathic individuals persist in financial misbehavior among the Dark Triad. *Personality and individual Differences* 67: 109-113.
- Kaplan S and Garrick B (1981) On the quantitative definition of risk. *Risk Analysis* 1(1): 11-27.
- Kimbrough R and Componation P (2009) The relationship between organizational culture and enterprise risk management. *Engineering Management Journal* 21(2): 18-26.
- Kirkhaug, R. (2010) Antecedents of risk in compliance enhancing organizations. *International Journal of Organizational Analysis* 18(4): 430-441.
- Kwak Y and LaPlace K (2005) Examining risk tolerance in project-driven organization. *Technovation* 25(6): 691-695.
- Lam J (2014) *Enterprise risk management: from incentives to controls*. John Wiley and Sons.
- Lee C and Shimpi P (2005) The chief risk officer: what does it look like and how do you get there? *Risk Management* 52(9): 34-36, 38.
- Levenson M (1990) Risk-Taking and Personality. *Journal of Personality and Social Psychology* 58(6): 1073-1080.
- Li K, Griffin D, Yue H, and Zhao L (2013) How does culture influence corporate risk-taking?

Journal of Corporate Finance 23: 1-22.

- Liebenberg A and Hoyt R (2003) The determinants of enterprise risk management: Evidence from the appointment of chief risk officers. *Risk Management and Insurance Review* 6(1): 37-52.
- London M (1983) Toward a theory of career motivation. *Academy of Management Review* 8(4): 620-630.
- Lyng S (2005) *Edgework and the risk-taking experience*. In Lyng, S. (ed.), *Edgework: The Sociology of Risk-Taking*. Routledge: New York, pp. 17-49.
- Lyng S and Matthews R (2007) *Risk, edgework, and masculinities*. In Hannah-Moffat, K., and O'Malley, P. (eds.), *Gendered Risks*. Routledge-Cavendish: Milton Park, pp. 75 - 98.
- Mackenzie, K. (1998) A framework for managing risky situations. *International Journal of Organizational Analysis* 6(1): 5-31.
- March J and Shapira Z (1987) Managerial perspectives on risk and risk taking. *Management Science* 33(11): 1404-1418.
- Marrewijk A (2016) Conflicting subcultures in mergers and acquisitions: a longitudinal study of integrating a radical internet firm into a bureaucratic telecoms firm. *British Journal of Management* 27 (2): 338–354
- Marshall A (2016) *Why Risk Cultures Need Prudence*. Southampton University Centre for Risk Research.
- Marshall A and Ojiako U (2013) Managing risk through the veil of ignorance. *Journal of Risk Research* 16(10): 1225-1239.
- Marshall A, Ojiako U and Chipulu M (2014) Micro-political Risk Factors in Strategic Alliances: insight from Machiavelli. *Competition & Change* 18 (5): 438 - 454.
- Marshall A and Ojiako U (2015). A realist philosophical understanding of entrepreneurial risk-taking. *Society and Business Review* 10 (2): 178-193.
- Marshall A, Baden D and Guidi M (2013) Can an ethical revival of prudence within prudential regulation tackle corporate psychopathy? *Journal of Business Ethics* 117(3): 559–568.
- Marshall A, Ashleigh M, Baden D, Ojiako U and Guidi M (2015) Corporate psychopathy: can 'search and destroy' and 'hearts and minds' military metaphors inspire HRM solutions? *Journal of Business Ethics* 128(3): 495-504.
- Mehran H (2016) Introduction: The Role of Culture, Governance, and Financial Reporting. *Economic Policy Review* 22 (1): 1-2.
- Morgan, G. (1997) *Images of Organization*. Sage Publications Inc.
- Merry U (1995) *Coping with Uncertainty: insights from the new sciences of chaos, self-organization and complexity*. Praeger: Westport, CT.

- Mikes A, Fraser J and Simkins B (2010) Becoming the lamp bearer: The emerging roles of the chief risk officer. *Enterprise Risk Management* 69-85.
- Miller K and Waller H (2003) Scenarios, real options and integrated risk management. *Long Range Planning* 36(1): 93-107.
- Mishina Y, Dykes B, Block E and Pollock T (2010) Why “good” firms do bad things: The effects of high aspirations, high expectations, and prominence on the incidence of corporate illegality. *Academy of Management Journal* 53(4): 701-722.
- Morgan, G. (1980) Paradigms, metaphors, and puzzle solving in organization theory. *Administrative Science Quarterly* 25: 605-622.
- Nair A, Rustambekov E, McShane M and Fainshmidt S (2014) Enterprise Risk Management as a Dynamic Capability: A test of its effectiveness during a crisis. *Managerial and Decision Economics* 35(8): 555-566.
- Nocco B and Stulz R (2006) Enterprise risk management: Theory and practice. *Journal of Applied Corporate Finance* 18(4): 8-20.
- Ojiako U, Marshall A, Luke M and Chipulu C (2012). Managing Competition Risk: A critical realist philosophical exploration. *Competition & Change* 16 (2): 130-149.
- Patterson F and Neailey K. 2002. A risk register database system to aid the management of project risk. *International Journal of Project Management* 20(5): 365-374.
- Pinder, C. C. and V. W. Bourgeois. (1982). Controlling tropes in administrative science. *Administrative Science Quarterly* 27: 641-652.
- Power M (2009) The risk management of nothing. *Accounting, Organizations and Society* 34(6): 849-855.
- Power M, Ashby S, Palermo T and Power M (2012). *Risk Culture in Financial Organisations: A research report*. Centre for Analysis of Risk and Regulation. London School of Economics and Political Science.
- Ring P, Bryce C, McKinney R and Webb R (2016) Taking notice of risk culture—the regulator’s approach. *Journal of Risk Research* 19(3): 364-387.
- Risk and Insurance Management Society (RIMS) (2012) *Exploring Risk Appetite and Risk Tolerance*. RIMS.
https://www.rims.org/resources/ERM/Documents/RIMS_Exploring_Risk_Appetite_Risk_Tolerance_0412.pdf, accessed October 31, 2016.
- Rittenberg L and Martens F (2012) *Understanding and Communicating Risk Appetite*. COSO.
- Roeschmann A (2014) Risk Culture: What it is and how it affects an insurer's risk management. *Risk Management and Insurance Review* 17(2): 277-296.

- Sharma K (2012) Financial sector compensation and excess risk-taking—a consideration of the issues and policy lessons. *DESA Working Paper* No. 115, ST/ESA/2012/DWP/115.
- Shinkman M and Herd D (2014) Establishing an appropriate risk culture. *Risk Management* 61(6): 10-12.
- Siegrist M, Gutscher H and Earle T (2005) Perception of risk: the influence of general trust, and general confidence. *Journal of Risk Research* 8(2): 145-156.
- Smallman C, McDonlald G and Mueller J (2010) Governing the Corporation: structure, process and behaviour. *Journal of Management and Organization* 16(2): 194-198.
- Smith C (2005) *Financial edgework: trading in market currents*. In Lyng, S. (ed)., *Edgework: The Sociology of Risk-Taking*. Routledge: New York, pp. 187-200
- Stein M (2000) The risk taker as shadow: a psychoanalytic view of the collapse of Barings bank. *Journal of Management Studies* 37(8): 1215-1230.
- Stulz R (2008) Risk management failures: What are they and when do they happen? *Journal of Applied Corporate Finance* 20(4): 39-48.
- Thorne M (2000) Cultural chameleons. *British Journal of Management* 11(4): 325-339.
- Tipu, S (2017) Entrepreneurial risk taking: themes from the literature and pointers for future research. *International Journal of Organizational Analysis* 25(3), <http://www.emeraldinsight.com/doi/pdfplus/10.1108/IJOA-08-2015-0898>.
- Tufano P (1996) Who manages risk? An empirical examination of risk management practices in the gold mining industry. *Journal of Finance* 51(4): 1097-1137
- Vaughan D (1996) *The Challenger Launch Decision: risky technology, culture and deviance at NASA*. University of Chicago Press: Chicago.
- Wilde G (1982a) The theory of risk homeostasis: implications for safety and health. *Risk Analysis*, 2(4): 209-225.
- Wilde G (1982b) Critical issues in risk homeostasis theory. *Risk Analysis* 2(4): 249-258.
- Willams T (1994) Using a risk register to integrate risk management in project definition. *International Journal of Project Management* 12(1): 17-22.
- Woods M (2009) A contingency theory perspective on the risk management control system within Birmingham City Council. *Management Accounting Research* 20(1): 69-81.
- Zinn J (2015) Towards a better understanding of risk-taking: key concepts, dimensions and perspectives. *Health, Risk and Society* 17(2): 99-114.