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Regulation and risk

Fiona Haines

1. Introduction

Risk often appears ubiquitous in modern life. We are inundated with news of terrorist attacks, environmental catastrophe and the emergence of diseases such as swine flu and Ebola, brought to us through a never-ending media stream. Conceptualising these threats through the language of risk enjoys widespread popularity and currency—a language that embodies ideas of rationality, probabilistic reasoning and modernity (Zinn 2009; Bernstein 1996). In this way, we are made conscious of our individual and collective vulnerability. Yet it is also within these overlapping paradigms that we understand our capacity to reduce the risks we face and to enhance our wellbeing. In this context, effective regulation appears as the antidote to many, if not all, contemporary risks. Risk and regulation are brought together through scientific and technical assessments combined with economic analyses to determine when, what kind of and how much regulatory control should be forthcoming to reduce a particular risk to an acceptable level. Arguably, it is by virtue of regulation that those in the industrialised world have come to expect safe food, safe consumer goods and safe buildings. Certainly, regulatory reforms that follow the realisation of a particular risk—whether an industrial disaster, financial collapse or some other event—suggest that our vulnerability to a wide variety of risks can be ameliorated through regulation. Regulation, realised in the form of a wide variety of policy instruments, including legal and quasi-legal strategies (Freiberg 2010),

is developed and enforced to shape everyday behaviours, technologies and organisational processes in a manner aimed at reducing the possibility of disaster.

This narrative of effective regulation as a response to an unwanted risk represents a dominant way of understanding the connection between risk and regulation. It is one, though, that requires complication to make sense of when regulation is forthcoming and why, and why some risks bring a significant regulatory response and others languish for want of attention. This chapter teases out this complex relationship by drawing on the literature on risk in the context of regulation—a broad remit that encompasses psychology, sociology, politics and law, among others. Many of these literatures are well represented in this edited collection and so the analyses of different aspects of regulation by a number of contributors are relevant to the analysis presented here.

A major puzzle for what might be termed the modernist narrative of the significant capacity of regulation to reduce risk, highlighted above, is the casting of regulation as a burden. Surely, the reduction of risk through regulation should be a cause for celebration? Yet this is only part of the story since, despite its promise of protection, regulation is often castigated as burdensome. 'Too much regulation' raises concern. Disparate actors voice their opposition to 'red tape', 'green tape' and the overweening influence of 'the nanny state'. Business voices are prominent here. Governments respond by undertaking various campaigns aimed at sweeping away this 'regulatory burden' and freeing the creativity of private enterprise (see, for example, Government of the Netherlands n.d.). This debate that oscillates between too much and too little regulation provides a critical insight into the way that regulatory reform and the challenges of compliance are part of an ongoing political discourse. It is a discourse infused alternately with a language of protection from risk on the one hand and of stifling creativity, agency and responsibility on the other.

When risk and regulation are understood as embedded within a political discourse, differences between jurisdictions, with their disparate conceptions and sensitivities to risk, become apparent. For example, the European Union is well recognised as a jurisdiction within which the precautionary principle can hold considerable sway. Under the guidance of the precautionary principle, a risk-averse stance is recommended where uncertainty about the potentially damaging long-term consequences of a particular chemical or side effects from

a pharmaceutical drug, for example, leads to a presumption that such a substance or process should not be allowed on to the market unless and until its safety is assured (Tosun 2013). In contrast, the pharmaceutical drugs regulatory approach in the United States tends towards a regime based on an iterative feedback model where products can be released on to the market without a full understanding of the consequences of that action. A preliminary approval process is undertaken and warnings are provided for the individual to make their own decision regarding its suitability for them. The aim is that the product will be redesigned as any negative consequences come to light (Davis and Abraham 2011). Similar risks and uncertainties arising within different contexts can generate disparate regulatory outcomes.

2. Three risks, not one?

The relationship between risk and regulation appears to be somewhat of a paradox. It makes regular media appearances with regulation being obvious and necessary for our protection against risk and, at the same time, onerous, unnecessary and burdensome. One way to make sense of this paradoxical relationship is to interrogate and break apart the concept of risk. This can be done by asking key questions about what kind of risk is at issue and how different risks may shape the imperative to regulate and deregulate. The first question to ask is who or what is at risk and from what source? In light of this, the second question is what is the relationship between this particular form of risk and regulation itself? The answers to these questions allow us to understand that risk in the context of regulation can be usefully understood as comprising three separate ideal types (Haines 2011: especially Chapter 2), which have a different subject at, or vector of, risk, which helps explain the way regulation is patterned. The interaction between these ideal types also helps explain the contested territory regulation often inhabits.

The first of these conforms to the idea of risk as presented at the beginning of the introduction. Here, what is at risk is the possibility of harm to an individual, collective or the environment arising out of an unwanted event. The vector precipitating this event can be apprehended as external to those individuals or groups affected or the natural environment that is threatened. This ideal type I term 'actuarial risk'. A disease, a fall from a height at a worksite and an unintentional release of toxic effluent from a factory would all fall within this conception of risk.

Natural, medical, engineering and their allied sciences are often used to determine the probability and impact of this kind of harmful occurrence being realised. Superficially, it would appear that actuarial risk is the one most commonly associated with regulation, exemplified by regimes concerned with infection control, public health, occupational health and safety and environmental protection. Yet, we know that scientific concern can often fail to produce the necessary social and political motivation for regulation to emerge. A prominent example here is that of climate change. Despite the scientific consensus on the catastrophic consequences of our impact on the climate for both humans and the environment, effective regulation remains elusive, as social, political and economic concerns shape what regulation is forthcoming and why. Two other ideal types capture these social, political and economic concerns and reframe them within the language of risk. These two allow us to better interrogate the political discourse around risk and regulation.

The second ideal type, 'sociocultural risk', comprises threats to the human collective. Sociocultural risks are those that threaten to harm collective wellbeing, comprising the social interactions that are part of everyday life—interactions that generate tangible needs, such as food, and the less tangible, such as a sense of security and belonging. This risk captures the reality that humans are social beings, and our concern with the health of the collective is a logical consequence of this (Douglas 1966). Social order, and hence events that heighten sociocultural risk, is also likely to be context specific. The introduction of a new technology (such as digital technology) may raise sociocultural risks, particularly when this technology mediates relationships (such as dating sites). New technologies, processes and relationships may be perceived as threats more in one context than in another and are certainly subject to changing perceptions over time. The point, however, is not that a particular social order is moral and desirable, or immoral and undesirable; rather, it is that, as social beings, we need some form of social order for our survival. For this reason, human beings are uniquely attuned to group wellbeing and their place within the group. Hence, those who voice their concerns and draw attention to what they perceive as being harmful to the social group not only raise issues of social concern but are also making a statement of belonging to that group. It is important to recognise that this reality of our interdependence does not preclude either significant conflicts in values within a society (expressed in different views about

what is a concern) or the presence of significant inequalities (Haines 2011: 44). The inescapable reality, though, is the need for a requisite level of sociality for a society to sustain itself (cf. Carson 2007).

The third ideal type—'political risk'—brings together within a single risk frame threats to political legitimacy and risks to the economy or, more accurately, to capitalist accumulation. The subject at risk can be understood not only as risks to the government of the day, but also to the legitimacy of a political system within a particular setting. This understanding of political risk is framed by the central task of government to sustain capital accumulation while also maintaining its own legitimacy, with an understanding that those imperatives may be in conflict with one another (Offe 1984; Habermas 1979). Threats to political risk, then, are, on the one hand, economic and, on the other, sociocultural and actuarial. Managing political risk involves ensuring the requisite conditions for capitalist economic activity to flourish and, through taxes and other charges, providing the necessary income for government itself to function. This economic requirement is met by the need for governments to reassure the citizenry of their security. The maintenance of legitimacy often involves governments protecting, or promising to protect, citizens from a wide variety of risks, most often in the form of threats to collective wellbeing. While some of these threats may be actuarial in origin, dealing with actuarial risks is not sufficient, or even necessary, to retain political legitimacy. Reassurance is a political dynamic framed towards sociocultural risk roots. What becomes obvious here is the way that sociocultural risks are inevitably drawn into political debates and governments positioning themselves to maintain their own legitimacy (cf. Clarke and Short 1993). Indeed, these political debates may actually deflect attention away from particular actuarial concerns. The debates around climate change provide an excellent example of the way political risk can be managed (at least in the short term) without addressing the actuarial risk problem.

As ideal types, none of the three—actuarial, sociocultural or political—will ever be found independently from one another. They exist in combination and in complex interaction. Nonetheless, their relative independence allows us to understand how and why regulation may concentrate on one area where, arguably, a problem of limited actuarial risk may lie, and yet concentrate on another where the actuarial risks may be real, but limited.

3. Risk, uncertainty and risk assessment

When each of these three ideal types of risk is examined, what becomes clear is that each has integrity. That is, a sociocultural risk to collective wellbeing (a serious undermining of the social fabric) or a risk to political legitimacy (the presence of serious political unrest or a military coup) can give rise to an equally problematic and harmful outcome as an actuarially based risk. Put simply, each risk is real and fears of their realisation may be entirely rational. But what is also clear is that the basic *assessment* of a particular risk can be partial, distorted or virtually non-existent. Levels of uncertainty and the contours of that uncertainty differ (Renn 2008). Actuarial, sociocultural and political risks are all subject to risk assessment—an assessment that must grapple with varying levels of uncertainty.

The relationship between risk, risk assessment and uncertainty is itself the subject of a considerable literature. On the one hand, some psychologists point to the frailty of human beings in their capacity to assess risk as well as differing appetites for taking particular risks (Slovic 1987). Here, regulation may well depend on the particular biases of the policymakers themselves. It may also depend on how a particular risk challenge is framed. As human beings, we are better able to apprehend the potential impact of a given risk than a finegrained appreciation of wide differences in the probability of its occurrence (Sunstein 2003). Further, certain risk events seem to garner greater attention because of their visceral nature (Sunstein 2005). Regulations, then, can be expected to cluster around events where the potential impact is severe even where the probability is remote.

Many writers also draw out the inevitability and even desirability of uncertainty. From the perspective of the natural sciences, science understands itself as an uncertain enterprise (Bedsworth and Kastenberg 2002). In the classic Popperian view of science, a scientific fact remains a hypothesis, waiting to be replaced with a more accurate analysis. Problems can arise, though, when science is brought into political debate and legal processes. Political debates look for certainties even as they exploit uncertainties for political gain. Politicians draw on evidence to support their own predetermined political positions in what has been termed 'policy-based evidence' as opposed to its more respectable cousin, evidence-based policy (Strassheim and Kettunen 2014). From a different perspective, Pat O'Malley (2004) argues that the very language of risk and risk assessment is an exercise in taming the uncertainty of governing

through risk while acknowledging that some level of uncertainty is desirable. It allows governments and authorities to act in the face of what may be essentially (and properly) unknowable. Risk technologies such as risk assessment, risk management and the like resonate with our understanding of ourselves as rational and risks in the world as calculable. Here, the connection with regulation is that it provides visible evidence that a risk has been tamed even as uncertainty remains.

This discussion of the relationship between risk assessment and uncertainty highlights the way a risk assessment ostensibly based on one form of risk—most often actuarial risk—may be driven by sociocultural or political risk concerns. Discounting an assessment as 'irrational' does not help us understand the complex nature of this dynamic. To be sure, there are some bureaucratic techniques that try to tease apart the actuarial from the social and the political to make good regulatory decisions. Their success or otherwise is often subject to intense debate. Cost–benefit analysis is one such example. Proponents argue that political priorities are essential and legitimate, but should be informed by a cost–benefit analysis or equivalent approach to encourage reflection (Sunstein 2005). However, attempts to capture social priorities are brought into the process. In the first instance, a cost–benefit analysis rests on a scientific or technical assessment of a particular actuarial risk in terms of its potential impact and the likelihood of its occurrence. The risk assessment here is based on an actuarial frame. The next step involves estimating monetary costs associated with reducing this risk followed by a formal or less formal process of understanding whether the societal benefits of the regulatory regime outweigh its costs. This involves a social calculus. In some cases, a monetary value is included that comprises a given society's willingness to pay for its reduction, and to what level. This may be calculated according to some value placed on a statistical human life. Value of a statistical life (VSL) calculations are subject to intense debate regarding their validity and their appropriateness (Fourcade 2009; Robinson 2009; Viscusi 2009a, 2009b). The substance of this debate often rests precisely on the degree to which sociocultural and political risk concerns are, or are not, made transparent through this process.

Even outside a formal cost–benefit analysis process, the way political or sociocultural risk concerns shape assessments of a given actuarial risk is often in evidence. A common example used here are those risk assessments made of the likelihood and impact of a terrorist attack within the context of Australia, the United States and the United

Kingdom. Considerable legislative and regulatory changes have taken place in these three jurisdictions following the terrorist attacks in the United States on 11 September 2001. These reforms, including those designed to reduce the impact and likelihood of an attack in a public place, such as an airport, rest on an uncertain and highly politicised risk-assessment process (Sunstein 2003, 2005). Indeed, it is possible to argue that regulatory reforms in this area have been designed as much to reduce political risk or enhance political legitimacy as to reduce the actuarial risk of a terrorist attack (Haines 2011: 115–23).

4. Risk management and regulation

This final section explores the connection between risk management and regulation; keeping in mind the three ideal types of risk is also illuminating. To illustrate this, this section begins with an approach that aims to enhance the self-regulatory capacities of organisations together with regulatory oversight—what Ian Ayres and John Braithwaite (1992) term 'enforced self-regulation', and others have labelled co-regulation (Wardrop 2014) or meta-regulation (see Grabosky, Chapter 9, this volume). As with other regulatory styles, co-regulation is most explicitly connected through the lens of the need to manage an actuarial risk, but its design seeks to engender a particularly conscious form of compliance. It requires a given regulatee, such as a chemical plant or oil refinery, to put in place its own regulatory strategy. This is designed explicitly for that site and is able to reduce or eliminate the potential for a catastrophic explosion. The site is then required to comply with the regulatory strategy it has developed. Within the major hazards area, this is labelled the 'safety case approach' (Haines 2011: 101–8). This form of regulation combines the risk management strategy of the regulator with the self-regulatory capacity engendered by an internal risk management process. Enforced self-regulation draws on the knowledge of actors inside an organisation to ensure risks are properly controlled while retaining external regulatory oversight to ensure this process has ongoing integrity. To be effective, it must be sensitive to sociocultural, and not just actuarial, risk concerns (Haines 2011: 149–54). While the relationship between the internal organisational actors and external oversight can vary (Wardrop 2014), the ultimate aim is the effective management of risk through engaging the conscious efforts of actors within the organisation to ensure risks are properly controlled.

This process of eliciting conscious effort in the pursuit of risk reduction, such as the safety case regime, has consequences in terms of the efforts needed for an organisation to comply. A conscious, thoughtful and systematic approach to the management of a potentially catastrophic risk engendered by a particular regulatory regime may be appropriate. But, in other cases, attempts by a regulator to elicit significant conscious effort may have significant impacts on other functions of an organisation—that are, arguably, more important. A good example of this problem is provided by Carol Heimer's (2008) analysis of AIDS clinics and the regulatory regime of government funders designed to ensure the proper use of government funds. What her research shows is that the onerous nature of this regime could have a significant impact on the capacity of AIDS clinics to provide effective treatment. Further, it appeared that political risk considerations about potential scandal to government from the inappropriate use of government funds, or at least use in an area not allowed for, drove the regulatory regime and increased the effort required to comply.

To be sure, various regulatory regimes have been conscious of the need to target resources and moderate the level of effort required by regulated sites to the level of risk posed. Risk-based regulation is the name given to this particular strategy. Here, regulators assess the impact and likelihood of noncompliance across their regulatees to decide where their resources are best employed. The greatest attention—arguably, demanded by a meta-regulatory approach—is directed to where problems are likely to be the most significant (see Grabosky, Chapter 9, this volume). The Australian Prudential Regulatory Authority (APRA)—the regulatory authority responsible for banks, insurers and superannuation funds—has designed its regulatory approach in this way. In doing so, it hoped to reduce the risk of financial collapse of one of these institutions or a serious inability to meet its ongoing liabilities. Its regulatory effort was framed to target those institutions with potentially the greatest impact should they fail (Black 2006; Haines 2011).

A major challenge, though, is that regulatory regimes are multiple not singular. Regulation and compliance are each aimed at removing different forms of risk from an overall beneficial and socially desirable activity. Regulation is an instrumental, problem-focused and narrowly targeted form of policymaking. It is supported by a risk-based approach to regulation—a modernist paradigm characterised by separating out,

analysing, assessing and managing discrete risks. As such, it highlights the significant challenge of a regulatory approach in managing a potentially broad array of disparate threats.

With a focus on compliance from the perspective of the regulated entity, as opposed to the regulator, particular challenges with a risk management approach associated with regulation come into view. Organisations are likely to be subject to multiple regulatory regimes, each with a particular risk and risk management process in mind. For example, compliance with various forms of regulation relevant to a for-profit business may entail the reduction of a diverse range of risks, from financial fraud, occupational health and safety risks, product safety and environmental concerns to risks of anticompetitive conduct, among others. In general terms, for-profit business is desirable not only in terms of the products and services it may provide, but also in terms of the employment it creates. An even more complex array of regulations may be associated with hospitals and schools. Both serve significant areas of human need, their activities are desired and sanctioned by governments and they often enjoy considerable public support. But their activities encompass a broad array of potential risks each of which is likely to be subject to regulation. Even where each of these risks has been carefully assessed and regulations have been designed to be as effective as possible, the capacity to achieve these outcomes without negatively affecting the public benefits inherent within a given activity may be difficult. To be sure, there are also examples where regulatory compliance enhances organisational outcomes—for example, good accounting practice may both reduce the potential for fraud as well as enhance the pursuit of good business opportunities, but this is not necessarily the case. Indeed, there may be examples where the aims of compliance in one area are in considerable tension with those in another (Haines and Gurney 2003). Further, the policy emphasis on internal risk management processes by regulated sites may simply be understood as part of political strategy to ensure governments protect their political risk liabilities at the expense of overall public benefit (Haines and Sutton 2003). Regulation remains critical to enhancing public benefit, but we should be alert to its inherent problems.

The problem of too much regulation—or what is sometimes called 'juridification' (Teubner 1998)—needs careful attention. A focus on political risk highlights why. The call for a reduction in the regulatory burden is common, particularly in the context of private enterprise, as highlighted above. The paragraph above explains why this may be

a problem. However, part of the task of political risk management is responding to this call from business to reduce 'red tape' in the hope and expectation that business activity will flourish. The reality is more complex. First, the impact of regulation on capital accumulation itself is not straightforward. Indeed, certain forms of regulation can engender business in their own right in terms of not only consultancies and risk management specialists but also technological innovation and industrial processes designed to reduce both human and environmental risk (Grabosky 1994; Jaffe et al. 1995). It is likely, however, that regulation will benefit some industries, and businesses within industries, more than others. The risk assessment process undertaken by governments in relation to the impact of regulation on conditions for capital accumulation may well be influenced by some businesses more than others. For example, the impact of the fossil fuel industry in weakening regulation aimed at mitigating carbon pollution and transforming energy production is recognised (Gunningham 2012). In other industries, too, such as regulatory reform in the context of the Global Financial Crisis, public concerns may be lost (Krawiec 2012). Further, the impetus towards reducing the regulatory burden in some areas such as corporate law may engender a positive feedback loop when any regulation, irrespective of its public benefit, is seen as suspect (Chen and Hanson 2004).

Finally, we turn to risk management in the context of sociocultural risk. The management of sociocultural risk can be seen to draw on interpersonal and, arguably, leadership skills rather than on technical acumen. The psychological literature on procedural justice and that on responsive regulation provide some insight here. Tom Tyler's work (2003), for example, shows how interpersonal skills are essential to ensuring acceptance of a given judicial or other form of authoritative outcome (see also Murphy, Chapter 3, this volume). Where people are treated fairly, listened to and their opinions respected, they are more likely to accept a given outcome even if that outcome is, on the face of it at least, not in their material interests (Tyler 2003; Braithwaite 2009). This suggests that procedural justice and responsive regulation tap into sociocultural risk management themes (Haines 2011: 44–5). At an organisational level, one can also look to the social licence literature. Research here points to the need for social acceptance of a given industry for it to function effectively. However, social oversight and acceptance may have different implications for particular actuarial risks depending on political context and the levels and contours of political risk. So, social oversight has, alternately, been argued to raise industry standards in some cases (for example, reducing pollution levels) (Gunningham et al. 2005), while other studies point to a social licence

being somewhat independent of actuarial concerns (Haines 2009) or even that social acceptance or a social licence (that is, successful sociocultural risk management) can be accompanied by ongoing and serious actuarial concerns (Bachrach and Baratz 1970; Culley and Hughey 2008).

5. Conclusion

This chapter has teased apart the complex relationship between risk and regulation through an analysis of the three different ideal types of risk at play. Risk is captured not only by actuarial risks—those threats able to be calculated through a scientific or technical frame. Critically, sociocultural risks, risks to collective wellbeing and political risks framed by the dual challenges for governments of maintaining the conditions for capital accumulation and for legitimation are also important to understand. Each of these risks has real consequences should they be realised, but they differ in who or what is at risk. Each ideal type is also subject to a risk assessment—judgements that grapple with varying levels of uncertainty and the influence of concern about other risk types. Risk assessment of actuarial risk, for example, is often influenced by political risk such as that discussed above in the debates about science. Sociocultural risk assessments are often political in nature.

The analysis above on uncertainty also points to risk as a modernist framework for understanding the world. A modernist paradigm sees threats analysed, teased apart and dealt with through multiple assessment processes that result in discrete risk management imperatives. Risk management is made visible in disparate regulatory regimes that cover a broad array of different threats. With this in mind, it is not surprising that there are common complaints of overregulation. Yet, uncertainty always remains and regulation may be as much about governments' need to demonstrate their mastery over uncertainty as it is about the capacity of a particular regulatory regime to reduce a particular actuarial risk.

A sustained interrogation of the connection between risk and regulation demonstrates the essential nature of regulation, yet also its limitations in enhancing our wellbeing. Ultimately, the dynamic of regulation may be best illuminated by the particular challenge of the management of political risk. Government assessment of the need to enhance capital accumulation may see it respond to business demands for deregulation, particularly by those businesses seen as central to a given economy. Arguably, capital accumulation and business acumen need some level of

uncertainty to flourish. But this imperative is met by a competing demand for governments to tend to their legitimacy—a demand more easily met by putting in place new or reformed regulation to manage disparate threats. Regulation as a solution to a political problem explains in part why regulation varies from place to place despite the similarity of the actuarial risk. The significant problem, however, is that meeting various demands for reassurance and juggling this with economic demands may not, in fact, mean that significant actuarial risks are responded to.

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