

Chapter 7

Interest, Interest, Whose Interest Is at Risk? Risk Governance, Issues Management, and the Fully Functioning Society

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7.1 Introduction

Risk management, including risk governance, is an ancient topic that has recently become a highly focused and robust discipline. As it changes and evolves, many points of analysis come into play, and paradigms push and shove one another. As Renn (2009, p. 80) set the scope and purpose of this discipline, he conceptualized it in the following way:

The ultimate goal of risk communication is to assist stakeholders and the public at large in understanding the rationale for a risk-based decision, and to arrive at a balanced judgment that reflects the factual evidence about the matter in hand in relation to the interests and values of those making this judgment.

By the logic of Renn's challenge, principles and strategies of risk management and risk communication both provide a rationale for societal risk governance as well as derive their shape and purpose from the dynamics of risk governance as it incorporates science, culture, and aligned interests. Conceptualized in that way, discussions of risk governance raise the question: By what authority and in whose interests does risk governance operate?

Such positioning and reconceptualization result from the notion that risk management may feature the role of risk governance as individual organizations adjusting their affairs to manage various risks, some of which they create. A focus on the individual organization's role and ability to create meaning can presume an atomistic and agentic organization approach to risk governance. It can reason that how risks

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play out and are ‘managed’ (which includes analysis, governance, and communication) is the responsibility of individual organizations exhibited various standards of corporate social responsibility. These can, as the logic goes, either be organizations that create risks (such as nuclear power generation) or have the mission and vision to manage risks on behalf of others (such as environmental regulation, public health and emergency management).

The narrow organization-as-agency paradigm pushes responsibility for risk governance onto the shoulders of such organizations, which thereby are expected to know and wisely manage risks. But it can, and often does, fail to ask in whose interests control is brought to bear or even possible regarding certain risks related to their management and decisions about who benefits and loses in the context of each risk. The same logic brings spotlight focus onto organizations that are presumed to or explicitly charged with managing risks such as global sustainability, environmental change, and infectious disease. Such mandates can be as narrow as government agencies that work to communicate with and motivate individuals to make wise personal health choices, which collectively tend to have public health consequences. Tobacco use is one example, as is vaccination and other means of dealing with communicable disease – especially that which can reach pandemic stages.

Issues of the sort highlighted in this introduction suggest many permutations on risk, responsibility, and locus of control that are fundamental to the dynamics of risk governance. On such matters, the history of risk management is as ancient as human society. However, a case can be made that the nineteenth century brought new challenges, advanced by the twentieth century, which have set the stage for a necessary discussion of risk governance in the twenty-first century. Central to that topic is the paradox that risks and their governance tends to require insights into the compatibility and collisions of interests within the decision-making capabilities of societal infrastructures and the meaning they create – as well as the meaning that empowers or disempowers various voices within the scope of the management of specific risks. Such challenges center attention on the willingness and ability individually and collectively of institutions and individuals to exert control of risks in the public interest.

Risk governance has emerged as a concept begging continuing insights, definitions, and practical application. It centers attention on how risks are perceived, scientifically assessed, culturally interpreted, and discussed in infrastructures. Such discussion necessarily pits some interests against others. It presses for insights into how societies create infrastructures and craft meanings that make collective decisions. Relevant to such perplexities, the literature of deliberative democracy postulates that risk governance is best when it is collaborate, integrative, and focused to achieve a fully functional society. That perspective does not deny the importance of the agentic organization working to manage and communicate about its risks or risks for which it is responsible, but it reasons that discourse is best in an agentic society where the abilities and challenges, both private or public, are brought to bear for the collective good.

With that thought in mind, this chapter offers insights into the challenges and gains from effective risk management based on the logic provided by leading

paradigms in risk management and communication as well as the study and practice of issues management. Framed in this way, risk governance requires the infrastructural and interpretive means to analyze conflicting interests and foster the general need for collective self-efficacy and legitimacy as a foundation for achieving a fully functioning society.

This analysis begins with a brief historical review starting in the post-Civil War era in the United States. In the last decades of that century, the USA witnessed a steady move to become an industrialized mass production mass consumption society. As corporations grew in size and enjoyed virtually unlimited risk self-governance, critics of such processes and practices began a battle to define what levels of various risks are safe and how fair safe is. That battle continues today. It is the essential dialectic of the self-interest of individual organizations against the aggregate risk management of society: The rationale of society is the collective management of risk.

This chapter features that dialectic as history and context for self-governance. In addition, it argues that risk management is both a technical and cultural challenge whereby forces of power discourse (institutionalized structures and co-created meanings) are engaged to abate and correct the imbalance of risk benefits and risk bearing. Because of the changing dynamics of the field, the 'new paradigm' of risk management is on solid footing but in need of continued development as it asks: Interest, interest, whose interest is at risk? By that emphasis, risk is not only approached as a matter of sound science but also as an alignment or collision of interests.

A collective approach to risk governance postulates that knowledge and balanced interests are fundamental to the appropriate control of risks in the public interest. As such science has the responsibility of identifying and calculating risk, but the final risk management decisions are best when embedded in a risk communication paradigm that is dialogic rather than monologic. As such, dialogues of risk decision making are no better or worse than the quality of infrastructures in which risk decisions are made in discursively and culturally sensitive ways.

The elaboration of those themes into a theory of risk governance begins with a discussion of risk management.

7.2 Risk Management: Foundations of Analysis, Communication, and Governance

The industrial and global political might of the USA, starting at the end of the nineteenth century, not only parallels the modern era of risk governance in other countries but also set new challenges into place. For instance, that era gave the world mechanically rolled, mass produced cigarettes, which facilitated mass consumption of a product which eventually became one of the nation's and world's greatest public health risks. In the latter part of the nineteenth century and early twentieth century industrial efforts worked to shrug off risks onto other interests, including workers, consumers, and the general public.

As a counterbalance to the growing might of industry and the creation of myriad risks, social movements such as Progressivism worked for legislation and regulation to bring substantially greater control over worker safety, community health, and public safety in areas such as transportation safety and safe food and medicine. Such trends suggest the role of scientific investigation of risks coupled with cultural assessments of those risks. And, in that dynamic, cultures as well as science tend to evolve and become intertwined in complex infrastructures which provide the power resources of risk governance.

Taking on the battle of risks in the last half of the twentieth century, critics voiced concern about nuclear weaponry and war of total annihilation. WWII brought about a new level of industrialization and global reach which set new risk standards and challenges. From that era, the current risk analysis discipline started, essentially tied to the rise of corporativization, which perhaps was nowhere more powerful than in the United States, where endless analysis is brought to bear regarding the identification of risk, management of risk, communication about risk, and weighing of the costs and benefits associated with risk.

Each year focuses risk analysts' attention on an unending array of risks – whether to foresee them or to respond once they manifest themselves by producing varying degrees of harm (micro-biology is one of the new disciplines in this regard). Some risks are timeless, such as diseases like malaria and influenza. Others are new or emerging. Technologies are created and used to reduce risk, such as bisphenol-a (BPA), but these technologies can also create additional risks. One of the uses of BPA is in bottles used to market water and other beverages. BPA is also an ingredient in the plastic that lines cans to reduce the damage from acidic foods such as tomatoes. Such plastics can add value to the quality of plastics but have been indicted as producing long-term health risks especially in children. (As a note, it is worth considering how a retailer such as Wal-Mart decided to move away from products, including those containing BPA, as a move to maintain its reputation as a responsive and responsible vendor of products associated with scientific controversy related to health risks, especially involving children.) Nuclear generating plants designed to one level of safety fail when both that level is exceeded and the maintenance and operation of the plant has not kept pace with the needs for community safety. Mining safety may increase, but miners still perish at work especially when management policies and practices override safety. Bankers and designers of mortgage instruments and marketing plans can create a financial system that leads to global financial calamity – strangely enough wrapped in the mantra of system risk reduction. This list goes on and on.

So risks confront humans and all for which they have dominion. Disciplines and professions have developed since the dawn of humanity to address and deal with such risks: Science, religion, politics, and even conventional wisdom often called 'old wives tales.' The point is that humans recognize risks, believe something can be done to foretell, mitigate, and even avoid them. This recognition also motivates people to either look for leaders who are assigned the power and responsibility to analyze risks and take or prescribe corrective action. As important is the realization that 'ordinary' people want to be part of such decision making (or leave such heavy

lifting to risk arbiters who are well positioned to mitigate risk as part of the risk governance process). Those choices are among the many options that result in battles and risk decision paradigms relevant to risk governance.

To that end, and because of several now iconic risk manifestations, people looked to science for guidance, insight, and solutions. Starting in the 1980s, 'hard' science and social science of risk analysis, management, and communication began in earnest to become well established and woven into the fabric of public and private life. In several ways, those approaches to risk are not new. In fact, it can be said that the rationale for society is the collective management of risk because of the timelessness and universal experiences of death and disease, accident and battle and even childbirth. Infrastructural changes occur in such matters whereby government agencies are developed to manage risks, as are private sector NGO (non-governmental organization) risk arbiters, such as the Union of Concerned Scientists.

By that logic, a powerful risk governance proposition is developing and being tested. It argues that societies that do best in collectively managing risks advance better than those that do not. In fact, one can argue that one of the causes of societies to end or be absorbed is explained by their failure to manage vital risks in competition with the superior risk management ability of other societies.

In the 1980s, risk governance led to refinements regarding the concept of risk and the assumption regarding its governance, often focused on either government or industry. The assumption was that if profit corrupts industry to be indifferent to risk management, public policy solutions must force industry to exert greater levels of control over industrially created risks.

The logic of that approach often presumed that the responsibility of either industry or government, depending on circumstances, was related to the obligation to inform. That principle of risk communication grew out of the era of 'right-to-know' and 'failure to inform' logics made public, for instance, by the asbestos controversy. That paradigm, as powerful as it was, could then allow an industry group to proclaim: We have informed the public so if they continue to engage in risky behavior we have satisfied our legal and ethical responsibility. Such a management and communication model can feature the role of information without acknowledging the reality that facts become meaningful only through interpretation. Such interpretation can have a scientific bias, or the bias of some scientists. And, it can have a cultural bias that may ignore, downplay, and augment the perceived seriousness of some risk. Thus, identification and assessment of risk is a vital aspect of risk governance.

As more and more academics and practitioners examined the topic, it became much more than a matter of information and even informed consent to what came by the late 1980s to be called, risk democracy. One reason for moving beyond a risk information paradigm was this: "Risk messages necessarily compress technical information, which can lead to misunderstanding, confusion, and distrust" (National Research Council 1989, p. 3).

That limitation, and many more, challenged those who examined the problem to eventually believe that rather than placing the locus of responsibility on one entity, the principle supporting such responsibility should be shared risk governance. Thus,

the new paradigm of risk analysis, management, and communication became captured in the concept of risk democracy (National Research Council 1989).

That move had liabilities as well as advantages. One of the liabilities was a more cumbersome process. As the National Research Council (1989, p. 5) observed, “Communicating with citizens about risks can increase their desire to participate in or otherwise influence decisions about the control of those risks”. Even though citizens may not know and may be incapable of appreciating the science of risk, they are presumed to deserve to have a role and voice in deciding what risks are safe, safe enough (Fischhoff et al. 1978), and how fair is safe enough (Rayner and Cantor 1987).

Addressing questions of that kind has led to an even higher sense of democracy, what has been termed deliberative democracy (Palazzo and Scherer 2006; Scherer and Palazzo 2007). By that logic, it is not only an ethical responsibility for organizations of all kinds to engage with citizens but also the essence of their legitimacy and the foundation of the authority by which they operate. They become legitimate based on how willing and able they are to engage as well as the quality of the processes and outcomes of that engagement. Collectively, this leads to a greater ability to control risk and prevent or mitigate its manifestation. That sort of principle is fundamental to any reasonable definition of risk governance.

Where risk communication and governance was in terms of academic and practitioner thinking in the 1980s and where it is today has substantial relevance for the continuing and evolving discussion of risk governance. As implied above, in the 1980s, it tended to be source-based and therefore organizationally agentic. That means that the responsibility for risk management and communication was largely considered to be the responsibility of key organizations. In part that logic arose from the asbestos cases which reasoned in court decisions that the industry had failed to warn people of the health risks. A similar logic arose from iconic cases such as the release of MIC (methyl isocyanate) in Bhopal, India. Key cases that led to the modern approach to risk management and communication tended to focus the responsibility on one or more organizations – with some vague justification based on the public interest.

The decades surveyed in this opening section featured a growing and shifting interest in defining and imposing higher standards of control, often under the umbrella of corporate responsibility and responsiveness. To that end, infrastructures have been created and destroyed in the tug of war over risk governance. Similarly, the vocabulary of risk, with its implications for the creation and shifts in power, has been a battleground, one never independent of collisions and new as well as shifting alignments of interests. In such infrastructures, voices of industry, government, and activists (NGOs) contested levels and locus of responsibility for identifying, mitigating, and assigning the burden and benefits of risks. Such efforts led to the development of various paradigms of risk understanding, perception, and control, which is the topic of the next section. These paradigms can narrowly be seen as different approaches to risk management and communication but more broadly analyzed as the pillars for effective risk government.

7.3 Paradigmatic Foundations of Risk Governance

Early efforts to increase the public capacity or efficacy to engage in risk governance led to the development of the Mental Models Approach (MMA) to risk communication (Morgan et al. 2002). That approach assigns the responsibility to scientists and key organizations, often businesses but also government agencies, to determine levels of risk (how safe is safe) and communicate them to key publics. According to MMA, message design strategies focus on the lack of knowledge, understanding, or agreement on key technical matters between experts (on behalf of organizations) and some part of the public (targeted audiences and/or concerned publics, especially risk bearers). The fundamental reasoning is that risk communication must effectively narrow the gap between what experts know and believe compared to what key publics know and believe.

MMA proponents reason that experts can and must accurately assess each risk's probability of occurrence, its impact, the entities affected, and means for its mitigation. They then should assess the gap in understanding and agreement between the scientists and other segments of any population. Although many contexts and various decision heuristics are routine in risk analysis, one is to calculate the probability of risk occurrence, the likely bearers of the risk manifestation, and assessment of whether the magnitude of harm outweighs the benefits associated with the risk. Finally, they should use communication strategies and tactics needed to narrow the gap so that targeted audiences/concerned publics come to accept the assessment and scientific conclusions preferred by experts.

As solid as that approach is, it is flawed for many reasons. One of which is the tendency for experts to disagree. Another is due to the recurring changes through scientific research in regard to standards used to assess risks, risk occurrence, risk causes, and risk mitigation techniques. A third is that lay audiences may not trust what the experts say and therefore seek alternative sources of information. Such changes suggest that risk management and communication (essential to effective risk governance, as well as the result of effective risk government) is a work in progress, a dialogic rather than monologic process.

Tensions between dialogic engagements versus monologues pose not only ethical challenges but are also at the heart of the risk governance challenge. The question is who decides what risk is safe and safe enough. Is that decision best left to experts, often serving corporate or government agencies? Or, should the public, especially risk bearers, be the ones to engage in debate and regulation of safety and public health? Can they raise questions and demand higher standards of risk assessment and management? Can they call for postponing industrial decisions that are not well supported by science? These are the sorts of challenges scientists encounter which may lead them to argue that lay audiences lack the knowledge and analytical skills needed to make sound science assessments and that such populations' risk perceptions are so distorted that sound science cannot prevail.

Substantial amounts of research over the years have addressed various publics' perception of risks and cognitive heuristics that influence how individuals

understand, accept, or reject risks -and their scientific assessment. Several key themes arose from such studies, one of which was the issue of gender. Studies found that women tend to be less tolerant of risks to hearth and home than are men, for instance. Risks can be less tolerated if the bearers are children; studies suggest as well that the level of exposure to some hazard is less for older individuals than is the case for those who have young and tender tissue.

Sensitive to questions regarding lay perceptions and acceptance/rejection of risks, scholars such as Covello (1992) and Slovic (1987, 1992, 2000; Fischhoff et al. 1978) initiated a massive research agenda to understand psychometric assessments of risk. Such work concludes that perceptions are not uniform across risk conditions and demographically distinguishable groups. Risk perception is complex, as is risk (in)tolerance. Thus, risk governance can assume that surveys, focus groups, and other tools are vital to the MMA approach or persons who are affected by risks should be included in decisions regarding their assessment, tolerance, and acceptance.

Scientific and social scientific assessments of risks and various groups' perception of them added value to the discipline but tended to privilege science, even social science, and those interests which funded the research and analysis. That kind of bias fosters an organizational agency as opposed to a community empowerment. Governance, in that way, tended to empower science, behavioral science, and the organizations which used such tools in their risk management and communication. But the dynamics of risk governance could, and did, not include the voice of those who were and could be affected by the risks. They could not affect those entities which created, interpreted, and assessed the risks and assigned the role of risk bearers.

Set against those disciplines, the paradigm of cultural interpretation and management of risk developed. It grew out of anthropology and reasoned that societies develop to collectively manage risk. By that logic, insights could be gained to reveal how roles (such as professions) developed specific to risk management. Thus, societies developed warriors which eventually translated into police, military, fire, emergency first responders, and such. Over time cultural sensitivity informed the investigative insight into risk, its management and governance.

That conceptualization, role dependent, played out in permutation. Various roles developed: religious leaders, as well as politicians, teachers, accountants, medical professions, engineers, and technicians came to be professional categories that played roles and performed functions to manage risks. All of these elements of society, and one can also include artists, were created to manage and communicate about risks. For that reason, discussions of risk society sought to understand how the quality of societies depends on how well each recognizes and develops functions and structures (as well as social constructions). Skilled risk assessment and management determines societies' success – or failure. That could and has been used to explain how some societies thrived and others even became extinct.

Drawing on the work of Edward Evans Pritchard and Emile Durkheim, Mary Douglas (1986, 1992, 1997; Douglas and Wildavsky 1983) was one of the intellectual pioneers in the contemporary development of the cultural interpretation of risk. Such works were based on the description of society, and, as critical theory

developed, provided analytical tools to assess power and ethics. All of this analysis has substantial relevance for risk governance because it asks: whose science should be allowed to assess risks and whose management decisions should guide the actions of society? Such thinking provokes interest in a wide array of voices speaking to the issue of how safe is a risk... and how fair.

Douglas' work was joined by others such as Ulrich Beck's (1992, 1995, 1996). One of Beck's arguments was that modern risks, such as radiation release, are no longer merely a challenge to and a political matter of a community or country. Risks often cross borders, and peoples of various cultures and countries experience similar risks and the challenges of their management. Such reasoning brought him to analyze the risk society with a particular interest in the topic being transboundary. The nature of the impact changed the conception of the public sphere where discourse and decision occur. Those advances forced reconsideration of the limits and challenges of risk governance. The scope and voices, as well as structures and functions at operation in each public sphere become important to discussions of risk governance. So too are the meanings that define and empower the infrastructures as well as emerge from the dialogue.

The cultural tradition in risk management has deepened and broadened. As Tansey and Rayner (2009, p. 53) observed, "By focusing on the inherently political character of risk controversies, it offers an approach to the interpretation of risk issues that contrasts starkly with atomistic economic, engineering and psychometric approaches". This profound observation sets a solid foundation for the discussion of the complexities and perplexities of risk governance.

One of the principles that flow from this analysis is driven by the recognition of and assumptions relevant to free will. The issue of risk governance is quite different if believed to flow from some immutable force and a decision heuristic that doubts free will. Thus, one can find advocates of risks as 'determined by a god.' They can even be the result of 'intelligent design.' One key challenge, however, is to see the paradox of risk management as not only the problematic of individuals' free will but also the complexity of society's decision making ability that can either recognize free will, or seek to deny it.

In that way, the cultural theory of risk advanced the analysis and gave grounding for an institutional and infrastructural approach. In this regard, work by Ortwin Renn and others is particularly relevant. As we pursue the dynamics of risk governance, then, we see the substance of science, and the discussion of perceptions, as either being incorporated into or challenged by the meaning structures and roles that are identified as discussed as risk culture.

One of the proponents of an infrastructural approach to risk, Renn (2001, 2008, see also 1992) has long worked to draw attention to the means by which each society identifies, interprets, manages, and communicates about risks. That means that risks are analyzed, managed, and communicated about within the infrastructures of society. Such societies require scientific analyses and communication within the spirit of MMA. They also are contextualized by the psychometric analysis of risk perception. They are culturally defined, including the normative ideal of empowering all interests to voice their judgments of risks, their analysis, management, and

communication. In this way, scientific investigation and conclusion must survive public scrutiny, no matter how unwise that analysis might be. And the paradigm of communication shifts from monologue to dialogue. Thus, we have the rationale for risk governance as risk democracy.

Renn (2009, p. 80) concluded that “the ultimate goal of risk communication is to assist stakeholders and the public at large in understanding the rationale of a risk-based decision, and to arrive at a balanced judgment that reflects the factual evidence about the matter at hand in relation to their own interests and values.” This is a powerful principle, fraught with tensions and perils. It suggests that risk governance depends both on the nature and quality of institutions and the meanings that shape them as well as result from them.

Risk infrastructures are power structures; risk governance is a matter of whose interests are championed and whose interests can or do suffer disproportionately as risk bearers. Risk governance is a process by which science, however sound, becomes the focus of consideration and interpretation. Rights, interests, and values become captured in the discourse and are shaped by the meaning structures at play and resolve themselves into new vocabularies.

One dimension of such structures is the systemically idiosyncratic structures and functions by which individuals perform various roles of risk management. Power by this line of analysis is in part a matter of the inclusion or exclusion as well as the hierarchical order and role of the decision makers. Thus, the institutionalization of risk deliberation, assessment, and management enables risk governance in various ways and to different levels of satisfaction by ritualistically assigning and responding to authorized decision makers.

A second aspect of the risk management and communication power of each society results from and leads to the meaning generated to interpret, mitigate, assign responsibility, and determine tolerance levels. Such meanings can allow or confound minds’ ability to perceive, interpret, and assess risk. Similarly, meanings can focus on what various risks mean for individual and collective identities and relationships; individuals’ identities can be shaped in terms of risk dynamics. And finally, meaning not only defines the risk tolerance accepted or rejected by society but also has substantial implications for the resilience of society in the face of risk. Seen then as structure and meaning, power explains how organizations and individuals bend reality to their interests and their interests to reality (Heath et al. 2010).

Rather than a monologic approach to risk communication as the outreach aspect of management and sound scientific analysis designed to ‘convince,’ the outcome power discourse is to help communities to make sound choices and wise decisions. Thus, Renn continued, “It is rather the purpose of risk communication to provide people with all the insights they need in order to make decisions or judgments that reflect the best available knowledge and their own preferences” (p. 80). Such analysis acknowledges that people bring to such discussions and decisions their own insights, however sound or flawed.

Such dialogue has many dimensions, but three of them are (1) science-based factual evidence and probabilities, (2) institutional performance, expertise, and experience, and (3) conflicts about worldviews and value systems (Renn 2009,

p. 81). All three are essential, but for purposes of decisional (governance) efficiency the third item in the list can in practice be slighted and even ignored. However that occurs or does not is vital to the character of each instance of risk governance.

The challenge of risk governance shouts for a kind of discourse that brings the voice of all interests to the public arena in meaningful and empowering ways. That is the only way in which perceptions and evaluations of risk can be brought to bear on the identification, evaluation, and policy formulation that meets the legitimacy standard of deliberative discourse. Such a shift in approach toward deliberative democracy leads to analysis of questions and the search for answers regarding fairness and competency in citizen participation (Renn et al. 1995). Policy, legitimacy, and communicative publics (including NGOs) become the problematic to be solved (Jones 2002).

Deliberative democracy presumes that political haggling, economic bargaining, and ethical discourse come together in varying degrees of harmony and tension. Such value laden discourse is framed in the larger sense of ethics which defines and sets benchmarks for the legitimacy of organizations which may create but regardless are expected to manage risks.

Such deliberation is likely to assess the legitimacy of organizations, roles, individuals, and meanings through comparisons of alternative grand narratives, those that lead to and away from risk manifestation. Relevant to such narratives is the willingness and values of stakeholders agreeing with narratives of risk management about which they deserve to engage (Scherer and Palazzo 2007). As such, risk management is not only a matter of positivism but also, probably even more importantly, a matter of engagement through collisions and alignments of interests and interpretations. Central to such challenges is not merely the spirit of discourse, as risk governance, but also the structures in which such discourse can meaningfully occur.

Risk democracy as a foundation for risk governance rests on many premises. Featuring an infrastructural approach to risk management and communication, Heath et al. (2009) offered what can be seen as a truism essential to the motive for community building through risk communication structures:

There would be no discipline called risk communication if all of the people of any relevant society perceived the same risks, perceived them in the same way, and reacted to them as of one mind. Instead, we are confronted at the basis of analysis with the reality that differences of many kinds and for many reasons account for the discipline and all of what makes it interesting. (pp. 472–473)

Scherer and Cho (2003) offered additional rationale for advancing the analysis of risk management, communication, and participative governance beyond the conception of risk as a matter of individual cognitive mechanisms, even the purview of ostensibly sound science. They found that “community networks may function in ways similar to organizational networks.” For that reason “our understanding of risk perceptions may also be improved by further exploration of social networks” (p. 267). In that regard, the important conclusion is not merely to see networks as a means for the efficient flow of information or even the structured and institutionalized approach to risk management, but to view networks as the interdependent loci

of participative decision making, thus risk governance. Efficiency could even be a liability if the volume of the flow was essentially a 'data' dump and because information does not come with pre-packaged and universally accepted interpretation and decisional heuristics (Hadden 1989).

Relevant to such thinking, McComas and colleagues (McComas et al. 2009; Trumbo and McComas 2003) have worked to conceptualize and link public participation and decision making through risk communication. McComas et al. (2009) dug deeply into the polarity of analysis regarding less public deliberation/discussion-oriented studies as compared to more public deliberation/discussion-oriented studies. Such analysis offered insights into this tension, "how much control over risk management decisions should agencies or authorities cede to members of the public" (p. 367). Similarly, such tensions center on the types of knowledge at play in regard to various risks. And, the discussion of risk governance must consider the types of risks as an essential element for the conceptualization and solution of the challenge.

Advancing the discussion of the conditions for participation, McComas et al. (2009) postulated several considerations, among which were incentives to motivate participants: Rational incentives, socio-economic incentives, and relational incentives. A corollary to recognizing these incentives is acknowledging the disincentives to participate, which include individual and infrastructural constraints or tensions surrounding the discursive process. These seem to be pillars for participation, risk governance, to build community efficacy and ensure representative engagement, substantive input, and legitimate outcomes.

That theme will be continued in the next section which explores the problematic of legitimacy (as well as companion concepts such as credibility and trust) as a fundamental battle over control and the challenge of risk governance.

7.4 Legitimacy and Discursive Processes of Interests

Exploring the issue of corporate legitimacy as deliberation, Palazzo and Scherer (2006) proposed "a fundamental shift to moral legitimacy, from an output and power oriented approach to an input related and discursive concept of legitimacy." According to their reasoning, that approach "creates a new basis of legitimacy and involves organizations in processes of active justification vis-à-vis society rather than simply responding to the demands of powerful groups" (p. 71). Another way of unlocking the challenge, a traditional approach to risk governance, conceptualizes organizations as engaging in business planning relevant to risks which then require monologic efforts to achieve concurrence with the plans as being legitimate since they manage risks in ways so that benefits outweigh harms.

Rather than an agentic, science based understanding of such matters, the new challenge is to link legitimacy with deliberative democracy. All voices count dialogically, and the presumption for the start of governance is that one organization or even several actually are not politically legitimate without public vetting. "This shift

also signifies the necessary transition from a cognitive and pragmatic approach to a moral approach in more and more legitimacy challenges of corporate decision-making” (Palazzo and Scherer 2006, p. 82).

Organizational decision making is the central and motivating concept in the development of issues management. This discipline grew by name from its origins in the risk controversies in post-WWII USA. The discipline developed as a reactive posture to widespread criticism of private and public sector business models relevant to nuclear war/nuclear energy, environmental impact, identity and fairness issues relevant to myriad demographic profiles, war and weaponry, corporate colonialism, and sustainability. This is not the full list, but suffice it to say, such investigation of legitimacy and the targeting of a legitimacy gap (Sethi 1977) was the essential rationale for social movement activism and thus the rationale for issues management (Heath and Palenchar 2009). One of the central questions underpinning the legitimacy challenges addressed through issues management is how organizations, especially large ones whether private or public sector, accurately perceived and wisely and ethically managed risks relevant to their mission and vision.

Risk governance presumes the requirement of legitimacy (and thus the concept of gap). By that logic, organizations derive their right to operate (authority) from the will of the community where they operate. These artificial citizens are therefore socially constructed entities; the rationale for their existence is that they add value and do no unacceptable harm to the community. That last sentence highlights three concepts relevant to risk governance: A right to operate, added value, and production of no unacceptable harm (and in fact management of risks in the community and individual interests). Corporativism can lead to risks or to role specific expectations that organizations are expected to understand, manage, and communicate effectively in the face of risk. In either case, corporativization presumes the tendency to interpret, manage, and allot risk bearing to the interest of organizations rather than to ways that make society more fully functioning. Instead of the corporate entity serving society, by that logic, society needs to bend to the service of the organization.

Insights into various kinds of legitimacy (Palazzo and Scherer 2006) open the risk governance analysis to the sorts of adjustment organizations and community members need to align their interests and feel individual and collective efficacy (Bandura 1997) in the face of risks and the counterbalance and allotment of their harms and benefits. Palazzo and Scherer identified several kinds of legitimacy:

- Pragmatic: calculations of risk harm-benefit ratios.
- Cognitive: structures, functions, and leadership behaviors that are relevant to sociocultural conditions and contexts.
- Moral: ethical justification of the organization as part of a community.

These become the tensions over legitimacy regarding the organization’s willingness and ability to manage risk in ways that lead to and reflect a fully functioning society.

Institutional theory, as a modern corporate and political theory, presumes that organizational legitimacy derives from the structure and functions, as well as rituals,

organizations need to produce the outcomes that justify their legitimacy in society. One view of that can feature the virtue of the agentic organization. A postmodern view, built upon reflective management, presumes that any organization can be sufficiently agentic to the extent that its commitment to and justification for existence is focused on the agency of society, the fully functioning society (Heath 2006). That theme is further developed in the next section.

7.5 Risk Governance: Politicization of Legitimacy, Control, Support/Opposition, and Efficacy

Relevant to risk and risk governance, the requirements for an organization's service to achieve a fully functioning society are inseparable from the authority by which the organization works to achieve its mission and vision. Risk governance presumes the politicization of organizations and risks. It elevates the discussion beyond fact and information which are never trivial to risk decisions but are not sufficient alone to support the demands of risk governance. Issues of efficiency and modern management are likely to be resolved in favor of community interests rather than individual interests. Deliberative democracy presumes a constructive dialogue that leads to support/opposition of risk analysis and risk tolerance. And risks are brought within the best kind and amount of control available to the collective judgment of society – its risk governance.

Sound science must accept the reality that it is politicized and must therefore sustain the analysis of fact and conclusion in a sociocultural context. That context has as its foundational rationale the control measures necessary to maximize risk/benefit ratios that depend on psychometric evaluations and cultural judgements. The infrastructure in which this discourse transpires must depend on a process that achieves collective learning, understanding, and fairness. Those are the principles of legitimacy, intertwined with standards of corporate social responsibility (CSR), as well as the guidelines for the collective management of risk.

Risk governance depends on the quality of discourse, the infrastructures in which it occurs, and the ability for the society to become fully functioning with a joined spirit that risk management is not an individual but collective endeavor. So too the CSR standards need to lead to appropriate understanding of the conditions and requirement of control in the face of various degrees of uncertainty. That reality recognizes that risk management and risk governance combine because they are essentially the collective management of uncertainty. Timeless considerations have focused on the ability to recognize, know, and bring reasonable amounts of control to the uncertainty of risk and the magnitude of risk manifestation of various risk bearers.

The essential challenge of risk governance is to distribute risk benefits and harms in ways that achieve community efficacy. In this way, standards of legitimacy presume that efficacy has at least three components: Expert efficacy (sound science, wise and responsible management, and even effective emergency management),

self-efficacy (identity and protocols needed by individuals to respond favorably in the face of risk manifestation), and community efficacy (the collective response based on expert and individual self-efficacy) as a collective response of isolates and interdependencies.

7.6 Conclusions

Risk management is the essential rationale for society. For that reason, the discussion of risk governance combines the other pieces of the risk puzzle so that they become a sociopolitical whole. As such, the dialogue over risk asks not only whose interests are at play but how the system and meaning of risk governance serves interests that benefit when aligned. Support for that conclusion results from the reality that sound science has a constructive but not imperial role to play in risk assessment and management. It is a foundational element for discourse, because it is essential to understanding how safe is safe, but even that analysis lacks the sociocultural status of deciding safety as a community construct rather than a probabilistic estimate.

Perceptions, sensitive to psychometrics, and judgments, sensitive to cultural interpretations, are vital to the evaluation of the fairness of risk: How fair is safe? This discussion does not occur in a vacuum or in isolation. It is a collective way of thinking, because ultimately science, evaluation, and judgment are community sensitive topics. If the role of society is the collective management of risk, then a risk governance perspective is needed for the other aspects of risk management and communication to have system and make sense.

The outcomes of the risk governance process are not only understanding and judgment but also support/opposition and community efficacy. It is a political question, one that examines the legitimacy of the roles individuals and organizations play, their efficacy in that regard, and the control that is collectively achievable on a risk-by-risk basis. In that way, risk governance is best when it aspires to result in fully functioning societies.

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