

# Conclusion

## **CONTROVERSIES AND FUTURE DIRECTIONS IN RISK AND CONTINGENCY MANAGEMENT**

### **Emerging Risk and Contingency Management Controversies**

Thus far in this book we have presented innovation research about how to manage risk or develop contingency plans for natural as well as man-made disasters. We also explored several novel approaches for managing risk in disciplines such as supply chain management, government, universities, investment firms and in manufacturing industries. We also have included a great degree of background theories, concepts, models and best-practices for global risk and contingency management. This knowledge should help to meet our goal of closing the gap in literature and to share ideas with researchers as well as practitioners.

The strengths of this book may be with respect to the cross-disciplinary coverage of risk analysis and contingency planning. In particular there was strong coverage of risk management and contingency planning for business operations as well as for natural disasters. When examining risks in either of those fields we learned that a retrospective approach using historical data and statistical principles are useful. However, the weakness and perhaps the most controversial unsolved subject matter of risk and contingency planning concerns man-made disasters, particularly terrorism. Thus, we felt we needed to include an additional closing chapter to address this controversial topic to stimulate more scholarly research that would close that gap in the literature.

If you read the previous chapters in this book you will notice a retrospective approach dominates the literature reviews and data analysis. This is necessary because we learned that in uncertainty is calculated based on past events while risks are estimated based on calculated uncertainty probability multiplied by the expected socioeconomic impact. The weakness with this retrospective approach is that human behavior underlies the uncertainty of man-made risks such as terrorism and crime. Humans are difficult to predict. For example, when looking at history of solar storms, hurricanes, tornados, earthquakes, wild fires and other natural disasters around the world, the numbers are much less than the number of humans on the planet. Humans do not necessarily behave in a cyclical manner as compared to natural disasters. Therefore, a different research ideology may be needed to better understand man-made risks.

We think a forward-looking insight into risk and contingency management can be found by looking at uncertainty using a different constructivist lens and through multiple analytical perspectives. Maybe the biggest risks and the most-needed research concerns the risks that we don't or didn't see in our book? One might speculate that there may be innocent looking controversies that are occurring around the world

that are overlooked by practitioners and scholars. As discussed above, the factors and models that could explain man-made risks are still missing in the risk and contingency management literature. These are the emerging factors that risk managers and contingency planners may need to mitigate problems in the future. Scholars should be researching these issues now to help practitioners in the future (Innerarity & Solana 2013; Korstanje 2015). To accomplish that we will discuss several interesting controversies and we will suggest several approaches that future researchers could take to study them.

Follow the money. That is an age-old axiom for investigating a complex socioeconomic problem. First though we must explain that culture is a factor in uncertainty perception and risk management. Later we will argue that global social culture has changed to become more risk avoidant and hedonistic which creates a bias against perceiving uncertainty and risks. However, we argue that where humans are concerned, there has always been a motivation for pleasure and profit. We hold the thesis that certain emerging controversies in the global risk and contingency management context may soon manifest into catastrophic man-made disasters of the future – namely criminal and terrorist activity.

When following the money, global insurance companies such as SwissSe and Lloyds are informative barometers of the socioeconomic value of emerging uncertainty and risk probabilities throughout the world. An insurance premium indicates the per-capita socioeconomic value of a risk (plus profit), in a relative sense. Where are the insurance practitioners in this body of knowledge – they are not in this book as of yet. They should be here. Lloyds of London for example are well known for being willing to insure anything, tangible or intangible, for a price. Why is it that Lloyds do not insure certain risks? Do they use big data analytics to determine that certain uncertainties are paradoxically too risky?

According to Lloyds (2017) Internet-related crimes against businesses and individuals is one of the biggest emerging global man-made risks. Global cybercrime has manifested in the form of theft of company data known as data breaches as well as forced corporate network shutdowns in what is called ransom ware attacks. Data breaches are perhaps not emergent since numerous companies including Blue Cross, Netflix and the USA government (e.g., 2016 Presidential Election) have been victims as explained earlier in Strang's chapter *Emergent issues in the World War against Global Terrorism*. An emerging risk is cybercrime such as the WannaCry cyber-attack in 2017 that negatively impacted more than 200,000 organizations in 150 countries (Lloyds, 2017). WannaCry and the Eternal Blue cyber-attack primarily targeted businesses in Europe and Asia, including UK National Health Service, the German State Railway, Honda Motors, and many others. Cyber attackers use viruses called malware embedded in emails sent to employees that bring down servers or they may originate from the Internet as network packets that are programmed to create a denial-of-service condition on critical servers.

Cyber-attack methodology is not necessarily new although the programming code is evolving. The emergent risk is that according to Lloyds the ideology of attackers such as the Shadow Brokers has changed from being a hacker codex to never put life at risk and to always work under the radar towards becoming a belligerent terrorist philosophy. The attackers create downtime and usually demand a ransom from the company in order to restore service or return breached data. According to four independent sources – IBM (2017), CyberEdgeGroup (2017) and Carbonite (2017) and Fortinet (2017) - most companies pay the ransom because it is more expensive to continue losing data or computer network service.

Somewhat related to the ransom cyber-attack risk is the loss of corporate reputation to clients. If a company loses client data, it has a domino effect because it may subsequently be used maliciously against customers, a class-action court action takes place, and the media will become aware and broadcast the particulars. Coincidentally gaining media attention and causing fear are the main goals of terrorists (as discussed in earlier chapters). Not surprisingly, fear of the loss of reputation is perceived to be the most

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critical of the top ten global business risks, next to economic slowdown, increasing competition, regulatory changes, and then cybercrime, according to multinational insurer Aon (2017).

Upon further examining the research by Aon (2017) it may be unusual to expect regulatory changes to be the fourth highest global risk perceived by businesses. Another perspective on that could provide insight. International trade agreements are evolving, or in the case of Brexit, they may be terminating by 2019, and national currencies fluctuate in unpredictable patterns. This is not the emergent risk that we forecast. Instead, we argue that counterfeiting, weapons trafficking and illegal agriculture environmentally damaging activities will become emergent global risk and contingency planning issues. Global Financial Integrity (2017) values global counterfeiting at \$1.13 trillion, weapons trafficking at \$3.5 billion USD, illegal logging at \$157 billion USD, illegal mining at \$48 billion USD, illegal fishing at \$36.4 billion USD and illegal wildlife poaching at \$23 billion USD. The profits of these crimes usually go directly or indirectly towards underground economies and terrorism. The risk for future risk planners is that a company or individual may unknowingly become embroiled in transactions related to these illegal activities either as a client or logistics agent.

Yet another perspective to the risk research completed by Aon (2017) concerns money laundering and fraud. Illicit financial flows are illegal movements of money or capital from one country to another which often result from the aforementioned illegal activities. For example, a terrorist group or drug cartel could use trade-based money laundering techniques to mix legal money from the sale of legitimate products with illegal money from drug distribution or cybercrime ransom proceeds. Also, a corrupt public official could take a bribe from a terrorist group or drug cartel or individually could be using an anonymous shell company to receive 'dirty money'. There have been several cases of human traffickers crossing borders carrying suitcases or clothes concealing cash.

Although current estimates are not finalized, illicit financial outflows from developing nations, particularly Africa, conservatively amounted to more than \$1.1 trillion USD in 2013 (GFI, 2017). This is a huge amount of money illegally exiting African countries. Ironically, African countries have been conducting capacity building to fight corruption, improve ethics, and stimulate better international and African Union trading (Strang, 2017). According to the African Development Bank, funding to African countries reached \$7.7 billion USD by 2015 (Strang, 2017). Could there be a tacit link between the risk of disappearing funds and the terrorist groups such as the Boko Haram in Nigeria as well as in other countries? According to GFI (2017), Africa is a net creditor to the world meaning that the socioeconomic impact of the overall capital outflows have a terrible, subversive risk on governments, victims of crime, and society – these activities facilitate transnational organized crime, foster corruption, undermine governance, and decrease tax revenues.

However, corruption, money laundering, and changing international agreements are not the true emergent risk. It is the money. The money from all of the aforementioned illegal activities must go somewhere to satisfy the pleasure-seeking behavior of someone. Therefore, the money often leaves one country and must end up in another. Research indicates that very often illicit financial outflows from developing countries ultimately end up in banks in developed countries like the USA, and UK, as well as in tax havens like Switzerland, the Cayman Islands, the British Virgin Islands, or Singapore (GFI, 2017). GFI research suggests that about 45% of illicit flows end up in offshore financial centers and 55% in developed countries like USA, UK, or Switzerland (GFI, 2017). The tax departments of developed countries have caught on to the various money laundering and tax sheltering schemes – they have begun to pursue their citizens to collect back taxes. The emergent risk is that since terrorists need money they are likely to soon figure out that a prime source of revenue would be to target wealthy individuals and

sheltered company executives who hide their money in these tax havens. If the tax department can follow the money, so can terrorists. The terrorists may need to become more educated, both on cybercrime as well as with financial tax haven data theft, or they may instead take hostages that have the requisite knowledge.

The medical field might seem an odd industry to be following the money to better understand emergent risk and contingency management controversies. Most readers will be familiar with the global fear of pandemics, airborne virus infections like H1N1 variants, tuberculosis reemergence, and others. Interestingly, human organ trafficking is now one of the ten most lucrative illegal activities around the world which is used to fund terrorism as well as underground economies. According to USA-based Global Financial Integrity (GFI) international organ trafficking grew from \$840 million USD per year to \$1.7 billion USD by 2017 (GFI, 2017).

The risk of organ trafficking to citizens worldwide is multifaceted. The risk ranges from being denied scarce healthcare services due to an illegal organ operation arranged by a privately-funded deal, to being the victim of someone taking your organs and disposing of your body. Wealthy business executives or professionals with top-of-the-line medical insurance coverage and healthy lifestyles usually have healthy organs and they also tend to travel more frequently which therefore increases their risk of becoming a victim. Global organ trafficking risk might even be multiplied by human trafficking risk, the latter of which is a more profitable global crime estimated to be approximately \$150.2 billion USD per year (GFI, 2017). Linked to human trafficking are the prostitution related scam risks including setting up professionals and executives for ransom demands that includes pictures or movies taken with hidden cameras. Remember we argued that thana-capitalism, pleasure seeking and risk avoidance through hedonism is a new sociocultural trend.

The pharmaceutical industry is another source of risk and contingency management controversy. There have been many cases of unsafe or merely ineffective drugs making it into the commercial market due to profit motives. These uncertainties are not unknown because insurance companies have already offered coverage for these risks. An emergent controversy concerns the increase in global illegal drug production both for health-related medications (to replace expensive commercial products) and pleasure-seeking narcotics. The international drug trafficking industry is estimated to be worth \$652 billion USD by 2017 (GFI, 2017). Again, the risks are multiple to citizens. People addicted to narcotics tend to fall into a life of crime to support their habit(s) which subsequently puts the everyday citizen at a correspondingly higher risk. Businesses are also at risk including not only the traditional bank robbery, credit theft or embezzlement but today we are more likely to see work-related deaths or injuries, which are estimated to cost USA-based companies over \$142.5 billion USD per year (NSC, 2017).

As a synthesis of the above discussion, we have identified five emergent global controversies that we believe future risk management and contingency planning practitioners will face. These include, in order of socioeconomic risk: counterfeiting/money laundering, human organ trafficking/prostitution, drug/weapon trafficking, cybercrimes – with all these linked to or orchestrated by global terrorists. These risks have already occurred but separately. Our perspective is that in the future they may be linked together. Ultimately, we believe that the human sociocultural hedonism attribute is driving this emergent risk. In the future risk and contingency management paradigm we foresee that terrorists will attempt to obtain more money which will allow them to fund new plots including for example buying a plane to crash as a weapon instead merely boarding one with knives as they did in 2001 (Strang & Alamiyeseigha, 2017). With sufficient funding, terrorists could purchase a transportation provider, several privatized hospitals, and a cyber security company to use those assets to carry out their ideology. A terrorist organization with

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a drug manufacturing, human organ trafficking, and cybercrime task force could generate enough revenue to purchase just about anything. The impact on citizens as well as on risk and contingency management practitioners could be direct, in a personal attack, or indirect on their company. Obviously, it is clear that we need more research into the future emerging paradigm of man-made risks.

## Background for Future Risk and Contingency Research

Ironically, the theories underlying this emerging risk and contingency management paradigm seem to be rooted in models that already exist in the literature, except that we need to apply this with new perspectives as discussed above. On that note, we want to briefly explore and synthesize almost 40 years of research revolving around risk and contingency management to develop a foothold from which to stimulate new research.

One of the most authoritative voices in risk perception is Renn (1998). His book, which is entitled *The Risk society: towards a new modernity*, asserts that the origin of modern risk society started with the nuclear accident of Chernobyl, in the Ukraine. In his viewpoint, the Chernobyl disaster created a paradoxical situation simply because the same technology placed to make this world safer and more enjoyable resulted in unseen risks which killed and injured many people. Such a made-man disaster operated by a government not only was unexpected – it served as a catalyst for a radical shift in the way we perceive uncertainty, especially when the government is involved.

From Chernobyl onwards, a new paradigm to interpret uncertainty arose in the sociology literature called the *risk society*. This term has a negative connotation, which means the citizens and stakeholders are embedded in a climate of extreme dangers and threats. The culture underlying the new risk society is grounded on a type of precautionary theory (Luhmann, 1993) or a risk avoidance social culture as it has become known in the emergent literature (Vajjhala & Strang, 2017).

The remainder of this background section is organized on a chronological basis. The first section, named as Preliminary Debate, signals to a short introduction of risk research while in the Nature of Risk, we discuss critically some studies that focused on the definition of risk. The gap between positivist probabilists and constructive culturalists has been enlarged, but this does not mean that a forward-looking viewpoint cannot be adopted. Therefore, in the section Present of Risk Research, we dissect the strongholds and weakness of the specialized literature and the different applications to applied research today. Ultimately, we lay the foundations to overcome the epistemological fragmentation risk research is facing calling the attention on the needs of triangulating qualitative and quantitative methodologies.

### Preliminary Debate

Risk has captivated the attention of many disciplines, such as anthropology, sociology, and psychology over the last 40 years (Fischhoff, 1995; Renn, 1998). For some reasons, risk research was widely influenced by the interplay between benefits and costs of the decision-making process. Based strictly on an instrumental logic (Short, 1984), academicians defined risk as associated with the advance of a civilizatory process which made from instrumentality its central value (Renn, 1998; Tierney 1999).

Renn (1998) confirmed that risk should be understood to the possibilities that some events affect the lives of others inasmuch irrespective of whether risks are pursued positive or negative goals, a causal connection between the event and its background is held. What experts do at the time of calculating the probabilities of risk means detailing what is at stake to protect the society from unwanted consequences?

*Risk is therefore both a descriptive and a normative concept. It includes the analysis of cause-effect relationships, which may be scientific, anecdotal, religious or magic, but it also carries the implicit message to reduce undesirable effects through appropriate modification of the causes or, though less desirable, mitigation of the consequences. (Renn, 1998, p. 50)*

This happens because the needs of anticipation to future are inextricably intertwined with the rise of risk perception. Traditional societies which are culturally attached to religion the existence of risk makes no sense, while in industrial or post-industrial cultures where the process of secularization undermined the influence of religion in daily life, risks and security are enthralled as the mainstream cultural values of society (Renn 1998; Giddens, 1991). Unlike other ages and cultures, only the capitalist society acquired the technological maturation enough to understand the world through the lens of risk. As Professor Levy explored, most likely the rise of capitalism and the obsession for freedom required a new form of dependence, which financially associated to uncertainty witnessed the rise of corporate risk management. Free citizens not only make the correct decisions but also should understand the aftermaths of their decisions. Risk mediates, in this way, between an ever-increasing capitalism and the uncertainty left by the destruction of tradition (Levy 2012). R. Sennett (2011) claimed not only that the abuse of risk is conducive to the expansion of capitalism but legitimates a much wider labor deregulation process that places workers as co-managers of their progress. The decline of a welfare state that offered multiple rights for workforce seems to be proportional to the flourishing of many risks for lay citizens. Taylor-Gooby (2004) acknowledges that the end of welfare state resulted by two important factors. The first refers to the decision to expand the life expectancy generating an abundance of retirees whose costs should be absorbed by never-reducing active workers. The second point entry in this discussion was associated to the introduction of technologies in the factories to improve the cycles of production, which derived from the rise of unemployment rates worldwide. In this vein, risk would be understood as discursive narrative elaborated for workers to accept voluntarily these new vulnerabilities the nation-state was hand-tied to resolve.

Said this, no less true is that psychology went towards other directions. This discipline emphasized on risk as the derivative result of perception, which activates as a dissonance between the best possible and the real decision made (Starr 1969). Hence the quantitative measures of risk perception adopted some metric scaling models to understand further the intersection of risk with personality (Stevens 1958; Lichtenstein et al., 1978). The urgency to standardize the different forms of perceptions into a valid model determined the interests of psychology for this topic. For sociology, the interest for risk takes another different path. Most certainly, sociologists imagined risk as a social construct inherently encapsulated in the productive system. Risk-taking and risk-avoidance were two key factors that invigorated the interest of sociology for risk research. The original concern was centered on explaining why some agents accept voluntarily extreme risks while others afraid of the situation keeps away from danger (Lyng 2004). One of the challenges posed by sociology consisted in deciphering how though individually perceived, risks are orchestrated into wider cultural discourses, which are culturally encapsulated in social imaginary. The fear of communism, terrorism or anything else is often shared by millions of citizens dotted with different stereotypes, experiences, and cognitive organizations. As P. Taylor-Gooby and J. Zinn (2006) put it, risk research not only gained traction over these years in the agenda of social sciences but also influenced by a wide range of theoretical perspectives, which merits to be discussed. In psychology, two emerging fields contrasted. On the one hand, the cognitive learning perspective signals to the belief

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humans are rational agents whose capacity of reasoning is constrained by their biography and possibilities to adapt the surrounding environment. Speculative in nature, this wave, fleshed out an interesting corpus of theory to anticipate how people think and finally act. Contrariwise, the empiricist-based approach defined a method which is entirely based on subject perception. In so doing, different open or close-ended questionnaires were employed to describe how people behaviors.

The theory of complexity and the efforts of sociologists revealed that risk comes from serendipity events, which have happened earlier than the disaster takes hit. Charles Perrow (1984) theorized adamantly on the nature of disasters as uncontrollable events which are very hard to forecast. Each accident reveals similar conditions appeared in the past but since the regulation of bureaucracy, as well as the ambiguation of rules in favor of efficiency, paves the ways for the rise of systemic failures which are impossible to predict.

As the previous argument given, Ulrich Beck (1992) starts from the premise that risk became in the epicenter of the world while the organization of society resulted in an egalitarian line of authority, defying on the already-existent hierarchies. In the society of risk, the classic class struggle sets the pace to the arrival of a new egalitarianism. Risk mediates between citizens and their social institutions to the extent all we are equal before risks. Although *Risk Society* inaugurated a set of different studies revolving around risk perception, no less true is that the already existent sharp contrast between probabilists and culturalists has been enlarged. Sociologists in the current generation do not agree on a unified conception about risk. Probabilists understand the risk as an objective condition that places the system or the self in jeopardy (Bernstein, 1996; Sunstein, 2005)-no matter than it is perceived or ignored. In contrast culturalists dangle the cultural nature of risks, which are not only linguistically conditioned but resonate differently depending on the culture and context (Douglas & Wildavsky 1983; Slovic 1993; Boholm, 2003; Korstanje 2015). Equally important are the assumptions formulated by German sociologist Niklas Luhmann in cataloging risks as inherently-enrooted into the principle of contingency. That way, Luhmann presents the distinction between risk and threats as his tug-of-war in the discussion ignited with other sociologists. According to Luhmann, should be defined as something else than a simple calculation -as probabilists do- or a cultural construal. Since ancient civilization fleshed out different techniques and protocols to mitigate the negative effects of quakes, floods and so forth, they were unable to produce risks. Luhmann emphasized risk is created by a previous decision making process which remains open to the contingency -this means that risk can be avoided. Instead, threats are often externally imposed on the self or community without any possibilities for victims to elude them. Such a provoking-thought argument envisages that while the privilege of the ruling elite creates the risks, the rank-and-file workers face the aftermaths (Luhmann, 1993). Hence, though Luhmann blames Beck to be alarmist in the diagnosis, he recognizes that only modern cultures produce risks. The produced-knowledge is the key factor that explains risks. While ancient cultures devoted their loyalties to the cult of Gods, modern society appealed to reason to understand its environs. At some extent, risk assessment adjoins to a much deeper process of secularization initiated during Industrial Revolution (Korstanje, 2015). This moot point was widely criticized by another senior sociologist, Sir Anthony Giddens, who not only opposed to Luhmann`s thesis, but also interrogated on the nature of risk as ever-present in the society, no matter the responsibilities of the decision-maker. As Giddens (1991) eloquently observes, in a society where information and knowledge are systematically produced, packaged, and disseminated to all classes, there is no place to surmise-as Luhmann precludes- that risk is strictly subject to individual or collective decision-making processes. Giddens (1991) added – “Who would escape to the hegemony of risk?”.

Through the hyper-connected society, in the digital days, we are deciding even when we stop to do it. In consonance with Beck, our British sociologist acknowledges that “we are living our days” in a runaway capitalism, where complexity and reasoning opened the doors to a process of reflexivity, unless duly-regulated by the risk-prevention programs and risk-management, may very well usher mankind in an imminent tragedy (Giddens, 1999; 2011).

Some intriguing points of convergence in Giddens and Luhmann are still open, which suggests that risks seem to be a modern-sounding theme, unknown by our ancient ancestors. In the turn of the century, new ascending risks placed Western civilization in jeopardy. These risks oscillated to natural disasters amplified by climate change, towards terrorism, or mass destruction weapons. This is the reason why we need to formulate an all-encompassing model that orchestrates the strongholds and weaknesses of culturalists and probabilists. This is one of the chief goals of the present edited book. The chapters selected through a peer blind-review process shed light on some of the aspects of risk-research as well as particular case-studies that focus on risk-formation and perception. In the first section, we place the main studies around risk under the critical lens of scrutiny (Skoll & Korstanje, 2012).

## The Nature of Risk

In the formulation of the question on the nature of risk, it is vital to conduct a full-review on the historical evolution of the issue in the threshold of time. One of the pioneer philosophers in dealing with fear was Aristotle, who theorized risk on its emotional nature. At a first glimpse, Aristotle never questioned the risk, simply because its etymology remained unknown to ancient Greeks. Aristotle held the premise that human behavior is previously determined by habits, which can be corrupted not only by the lack of but also by the excess. Even if fear follows a precautionary nature protecting people from external dangers, for example to war or to crime, its excess transforms a hero to a coward. As a fundamental passion, fear is activated by the desire of pleasure-maximization (Höffe, 2010). The obsession for pleasure as well as the needs of avoiding suffering was not only the touchstone of Western civilization but an old-dormant concern which inspired the British philosopher Thomas Hobbes in his conception of *The Leviathan*. People debate between two contrasting forces, the needs of avoiding a violent death and the needs of possessing others' property. To avoid the “war of all against all”, citizens endorse to a third party, *The Leviathan* the monopoly of force and law. While the notion of civility, which was historically cultivated by nation-states, is formed by mitigating the disrupting human nature, fear is located as the core of society (Hobbes, 2006).

Over the recent years, applied-psychology has amply demonstrated not only that fear is a basic emotion but it can be manipulated to create habits. Following this conception, its functionality relates to the survival of the organism, through the articulation of different responses as flight, attack, or paralysis (Levenson, Ekman, & Friesen, 1990; Strongman, 1996). However, not all disciplines developed the same definition that the psychological approaches agreed. Modern Philosophy, in this vein, has developed an interesting debate that helps dividing conceptually the fear, which was historically the object of psychology, from the angst, which situated as the tug-of-war of existentialism. Philosophers such as Martin Heidegger envisaged that the angst was the necessary result for the arrival of modernism. Unlike fear, which is limited to a specific object, angst operates within the diffuse horizons of uncertainty and determining the ego. More dispersed in its nature angst can be explained as encounter between the *Dasein* (*being-here*) and nothingness inasmuch as *Dasein* engages with their desire of living. To put this bluntly, angst derives from the liberty given to self to make decision, and of course face its conse-

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quences (Heidegger, 1996). As Giddens (1991) stated, not surprisingly the rise of modernity opened the doors for the advent of angst, and anxiety, in consonance with the decline of religion as an all-pervading system. It is safe to say that the risk society is inextricably embedded with uncertainty (Beck, 1992). In his book, *The Society under Siege*, Bauman (2013) bemoans that the risk was a cultural construct, which introduced by modernity, allowed to capital owners to control (or at least imagine) the not so-distant future. The question whether in the medieval times happiness was a right only reserved for few people, who had experienced an earlier deprivation?. The founding parents of the United States declared unilaterally that all men have the same right to feel happiness (contrasting to the aristocrat conception forged in Europe), while the state should devote its resources to achieve such a goal. The old doctrine that happiness only can be reached by suffering sets the pace to a new ideological message, where the nation became in the stalwart supporter of a welfare state. At the time, following the Hobbesian terms, citizens compromised to abide the legitimacy of law, governments ensured a just distribution of goods to meet the individual needs. In that way, the medieval lemma where suffering was the necessary pathways towards happiness was unearthed from the dust of oblivion, and applied in the works of modern thinkers. As Bauman explains, the modern thought is based on the belief that postponing the pleasure today will grant a future long-lasting happiness. Paradoxically, such a stance created an obsession to forecast the future, which paved the way for the rise of risk and risk perception. Following Bauman's analysis, while mankind needs from progress and happiness, risk surfaces. The imposition of happiness as a mainstream cultural value of society entails in the levels of tolerable uncertainty respecting to what the future has in store (destiny). Whether the medieval man imagined the future as inexpugnable, happiness was limited to the ruling class but once liberated, risk mediated between the citizens and the social institutions. In earlier approaches, Korstanje (2014; 2015) examined the social scaffolding of Protestantism as the key factor that explains why some societies—preferably English-speaking culture—are prone to risks while Mediterranean or Latin Americans remain indifferent. From its inception, Protestant faith not only interrogated the hegemony of Catholic Church but ignited a cosmological change, which passed from a Church-centered faith towards a more individual theology, adjusted to what people need. The sense of predestination, which is enrooted in Protestant-related minds, offered a closed-view of future. Anglo-Saxons developed a culture oriented to inspire a technological breakthrough with the end of forecasting the future. Once the future was colonized by “the Anglo-Saxons” through the articulation of digital revolution, the inflation of risks soared.

In this case, both culturalists and probabilists are wrong, simply because risk as objective danger only can be feasible through the abstraction only English-speaking societies achieved. The best example on this point reflects the anecdote of a native tribe physically located alongside to a volcano. They developed their own cosmology and mythology around this giant. One day, a bunch of scientists invaded the community alerting on the imminence of a potential eruption. Volcanologists emphasize on the urgency of evacuating the zone in view of the risk their technology found. In sharp opposition, the chief of the tribe manifested their displeasure blaming the volcanologists to trigger the God's rage for the obtrusive technology that was unilaterally imposed. The same situation evinces two contrasting perceptions, while the western scientists see an inevitable risk that called to the state intervention, the natives perceived this as an extreme provocation (Briones-Gamboa, 2007). This is the best metaphor that describes how risk works. As the advance of rational science-centered paradigm declined the trust of religion, the doctrine of security surfaces to keep the society united (Beck 1992; Korstanje 2015). It is tempting to say researchers and fieldworkers should find new alternative pathways that leave behind these old debates.

In parallel, recent studies aim to discuss the role of communication in the formation and perception of risks (Fischhoff, 1995; Morgan, 2002). The professionalization of culture was widely explored by Bledstein (1978) who acknowledged that the culture of individualism, as it was cultivated in the United States during the eighteenth century, is the platform for thousands of young students in quest of social upward. Education not only assured them the cultural basis of reproduction as a new burgeoning class, but also laid the foundation of the needs of designing new professions to solve problems and mitigate risks (Bledstein, 1978). Henceforth risk and science were historically inextricably intertwined. The specialized literature found interesting correlations between risk perception and gender (Gustafsson, 1998; Johnson & Powell, 1994; Flynn, Slovic & Mertz, 1994), risk perception and class (Mitchell, 1998), ethnicity (Fothergill, Maestas, & Darlington, 1999), and religious affiliation (Kahan et al. 2007). This point was addressed by Sjoberg (1999), who alerts that the ways how risks resonate in some persons depends on the previous familiarity with the situation. While specialists, pundits, and experts have developed a rational diagnosis of the risk, which prevents some emotional over-exaggerations, lay-people are often more prone to risk perception.

Last but not the least, Sunstein (2005) in a seminal project entitled *Laws of Fear: beyond the precautionary principle*, made preliminary remarks regarding the inflation of risks, lest rationally regulated may usher Europe and the United States into a climate of populism. In this respect, Sunstein examines the role of rationality in the formation and communication of the risks. The epistemological border between security and insecurity are culturally determined by the political system. According to Sunstein (2005), deliberative democracies are characterized by the pluralism of voices, whereas in dictatorships or demagogic populism decisions are made by top officials. Though experts play a leading role in the discussion of those matters that can place the society in jeopardy, no less true is that the state of disaster can be avoided if the decisions are collectively discussed. This belief would explain the reasons as to why democratic societies have more instruments to face disasters than totalitarian or authoritarian ones. Whereas the latter does not provide their citizens with the necessary steps to evaluate the pre-existing risks, the former invests a considerable amount of capital in the process of mitigation and preparedness for natural catastrophes. In this context, the precautionary principle, which is based on the European model, obscures more than it clarifies. In fact, the precautionary principle sometimes gives the necessary conditions for risks to be multiplied. The bombing of risk-containing news, far from enabling commitment in population, creates paralysis. Underpinned in the ethical quandary, which superposes knowledge-production to risk-assessment, Sunstein (2005) clarifies the worst happens when even experts follow their surmises and diagnoses irrationally. Sunstein (2005) coins the neologism, risk-neglect to theorize on the effects of irrational decisions, which are conditioned by populist demands or incorrect diagnosis. The current inflation of risks derives from two psychological mechanisms, the neglect of probability and the heuristic of risk. Given by emotional dispositions, people are trapped into some preconceived beliefs that keep them away from rational evaluations. The heuristic of risks exhibits a tendency to misjudge risks by the potential effects instead of probabilities. This means that some serious risks are trivialized while others are over-valorized (Sunstein 2002; 2003). One of the contributions of Sunstein on the studied theme includes reminding the importance of risk as something else than a cultural construal alone. Although communication is of paramount importance to give risks specific meanings and interpretations, further investigation is needed in a combined model that alternates quality-conducted ethnography that helps grasping the biography of subjects with probability-based models to expand the current understanding of risk (Goodwin & Strang, 2012; Strang, 2015). The chapters integrated in this volume fulfill such a gap.

## **Conclusion**

### **The Present of Risk Research**

Although risk-research represents an important aspect of applied psychology and captivates the interests of sociologists as well, no less true is that after the turn of the century, risk and risk perception became two buzzwords as never before. The attacks perpetrated on the World Trade Centre and the Pentagon in September of 2001, the Tsunami that whipped Sri Lanka adjoined to the outbreaks of lethal viruses as SARS or even the frightening sight of deadly Ebola made some scholars to think we are living in the days of terror (Nabi, 2002; Robin, 2004; Giroux, 2005; Soyinka, 2007; Chomsky, 2003; Kupchik, 2010; Korstanje, 2015, 2017; Skoll & Korstanje, 2013; Skoll, 2007, 2011, 2016; Strang & Alamiyeseigha 2017). Whatever the case is, the number of studies and publications containing risk perception and risk research have notably increased after terrorism woke up Americans from the slumber they were. In the mid of this mayhem, paradoxically not only risk was internalized by the colloquial language and the social imaginary but management and marketing has introduced the concept of risk taking to improve the managerial perspectives of organizations, which denotes the urgency in reducing the levels of uncertainty to make correct decisions (Martin et al., 2015, Hoskisson et al., 2017, Stulz, 2015) or the financial factors that may wreak havoc the economy of developing nations (Angeloni, Faia, & Duca 2015; Bruno & Shin 2015). Another interesting point of convergence seems to be the intersection of risk and insurances and the risk management research design ideologies (Strang 2015a, 2015b).

We have reviewed only a portion of what academics have published taking risk as a primary object of study. Risk research is facing some criticism centered on the following points and topics. This does not exhibit an attack to any colleague but only a critical review section on the problems and limitations of risk perception today. To some extent, many fieldworkers and professional researchers prioritize quantitative-related methods over qualitative ones. They hold the premise that correlating variables and mathematical algorithms give a snapshot of the situation, which would somehow help in the decision-making process. Though this is an interesting point to discuss, it is important not to lose the sight of the problems of adopting a quantitative research approach alone. On one hand, there is dissociation between what people think and finally do. This means that interviewees and closed-led questionnaires sometimes reflect what people think but as psychology has amply showed, interviewees may lie or simply are incognizant of their inner-world. On the other hand, the disparity of meanings and disciplines that use risk as a variable ushered academicians towards an epistemological fragmentation of produced knowledge. The debate between probabilists and culturalists not only still seems to be far from being closed, but gives too much confusion and misleading conclusion to researchers' fallout. Another point suggests that quantitative investigations misjudge description with explanation. To put it in another way, while we say that women are more prone to risk perception than men, we must admit that gender and risk -as involving variables- correlate to perception. However, if given a much deeper gaze, for example through the lens of ethnography, most probably the results would take different connotations. Females are socialized, or at the best, educated to protect family while males are pressed not to accept and manifest their emotions. The archetype of masculinity would be seriously harmed whether interviewees recognize a situation as risky. Over the recent years, interesting discussion has given by ethnographers at the time of reconstructing the biographies of interviewees and their position to risk tolerance (Zinn, 2010). In addition, some emergent studies provide us with convincing evidence that there is dissociation between risk, which remains encapsulated in the cognitive system, and emotionality which delineates the borders of experience (Larsen, Brun & Øgaard, 2009, Wolff & Larsen 2014). In this respect, dwellers of a city that is contaminated with radioactivity may develop higher levels of resiliency adopting some mechanisms

of adaptation to cope with serious risks while people may be manipulated. In a seminal book, which is entitled *Dealing with an Angry Public* professors, Susskind and Field (1996) dissect the different steps and protocols to avoid when the community reacts negatively to certain risks. These authors not only remind us about the importance of communication in risk perception issues but also continue with the debate left by Sunstein respecting the emotional distortions of events. With the benefits of hindsight, Adam Burgess and his colleagues called the attention to the need of adopting new paradigms that transcend the quantitative vs. qualitative approach. Originally grounded in interplay between affect and cognition, risk unless duly identified and mitigated may lead to precautionary doctrines. In the capitalist societies, governments are prone to minimize the effects of risks strictly on the basis of available information in the past (Alaszewski & Burgess, 2007). The emergence of a risk culture in England and the US has not received the necessary recognitions by the side of scholarship while a few radical voices have criticized the precautionary platform as a path towards populism. Burgess sets forward a model that combines the qualitative and quantitative methods towards a triangulation of information where the subjectivity of the agency and the rationality of measurement are interlinked (Burgess, 2006).

Last but not the least, Korstanje (2014, 2015) in earlier approaches has explained the English-speaking cultures are more prone to risk than Spanish ones because of the influence of predestination and Protestantism in the configuration of the external worlds. At the time, the future remains inexpugnable for Protestants risk represents the needs to domesticate future from the present-time. Since the salvation of souls is predestined in the reformers of Protestantism, no less true is that -unlike Catholicism- nobody knows who is salved or doomed. While Catholics avoid the sins in the present to be accepted later in heaven, in the Protestant Faith there is nothing to do whether the soul is not listed in the Life Book or not. Not only does this create higher levels of anxiety which is rechanneled towards productivity, but English speakers have no way to understand their destiny lest using their technology to colonize the future.

### Guidelines for Future Research

This book, which was formed by the invitation of well-versed scholars, provides fresh insights that shed light on the diverse risk and contingency management issues, practices and models use by practitioners. In the chapter *Beyond the Precautionary Principle: Is Terrorism A Real Risk* Korstanje argues that extreme government measures against terrorism uncertainty, beyond the risks that actually existed, led to the rise of ISIS in Middle East. The obsession for preventing disasters seems to have created paranoia of uncertainty which is conducive to terrorist goals. In *Emergent issues in the World War against Global Terrorism* Strang analyzes the impact of global terrorist attacks and demonstrated that in fact they probability is actually very low in high risk avoidance cultures such as in USA. Nonetheless countries like USA have invested heavily in military and reduced the rights of citizens (as well as visitors) as an extreme precaution against terrorism. Future risk researchers should investigate these controversies.

Researchers should examine the emerging claims voiced by the authors of the chapters in this book but without ignoring the background of risk and contingency planning theories that we outlined earlier in this last chapter. It seems that one of the challenges for subject matter experts to investigate is how to quantify uncertainty into accurate sociocultural risks (or non-risks) and then if or how to communicate this to citizens. What we mean by this is that some uncertainty may actually have very low probability of occurrence (e.g., attention seeking terrorism fear propaganda, transportation accidents) in a given context and therefore citizens may not benefit from being panicked of a false positive. On the other

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hand, some innocent or low-key factors may in fact present huge potential risks (such as pandemics or Internet financial system crashes).

As Howie (2012) puts it, over the recent years governments have failed to correctly quantify terrorism uncertainty and by playing into the false positives of the fear of terrorism or ignoring the false negatives of serious threats, casualties, material losses and panic has resulted. The mass media seems to control the government and citizens when it comes to uncertainty quantification and risk identification. Whatever the media says it taken as verbatim and that serves as the catalyst to action or no action.

Risk avoidance social culture tendencies and anxiety cause citizens to have biased exaggerations when diagnosing risk (Vajjhala & Strang, 2017). Resentment and social unhappiness create a climate which paves the ways for the rise of radicalism especially in the younger generation of citizens (Altheide, 2017). These global macro environmental trends need to be further researched.

## **CONCLUSION**

Closing an edited-book which contains an interesting number of chapters with foci on innovative risk and contingency management research, is not easy. The discussion in this last chapter has articulated a link between the old paradigms of risk theories and the modern context of global uncertainty.

Social culture and philosophy seem instrumental to understanding the perceptions of the links between risk, uncertainty and contingency planning. The risk and contingency body of knowledge needs a new agenda that serves to make the life safer and more comfortable for citizens of every nation, and not just in the USA or in developed countries. However, in so doing, specialists and pundits face a serious challenge. Sunstein (2005) points out that the culture of risk is mediatically inflated to work as a form of escapement or entertainment, which has been explained by Strang (2012) as a global sociocultural factor called hedonism or pleasure seeking.

Risk management and contingency planning has become routinized over the last two decades spurred by the Chernobyl disaster. These security protocols and safety measures actually undermine our alertness to more dangerous risk factors that lie just below the surface. Beyond the scientific issue of whether a manmade or natural disaster might occur, we have also found that a growing focus on profits and hedonism has caused many people to ignore or down grade uncertainty in exchange for pleasure. These global risk and contingency management controversies should be further examined by scholars and practitioners – and not merely sensationalized in the media.

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