

Chapter 2

Theorizing the Risk City

2.1 From the World Risk Society to the Risk City

When interrogating the concept of risk, social scientists have focused their attention on society at large and have invested little thought in space, or spatial spaces. Anthony Giddens and Ulrich Beck conceptualize both modernity and modern societies as a function of risk. In some senses society, or the “risk society,” becomes a grand narrative that must be dismantled and deconstructed before we can truly understand its consequences. By theorizing the *risk city*, I seek to adapt this general notion to smaller-scale contexts of modernity by shifting attention from the risk society as a whole to the very real risks present at the urban level. By doing so, I am attempting to *spatialize* contemporary emerging risk and uncertainties in the context of the city as a human habitat.

Giddens (1999) views risk as inseparable from modernity and as the mobilizing dynamic of societies that are bent on change and determined to control their own destiny rather than leaving it to religion, tradition, or the vagaries of nature. Prior to the modern era, cultures possessed no concept of risk and “lived primarily in the past,” invoking “ideas of fate, luck or the ‘will of the gods’ where we now tend to substitute risk.” Modernization did not do away with the traditional view altogether, and concepts such as fate, god’s will, providence, and other mystic notions still play an influential role among some, albeit as superstitions in which many only partially believe and often adhere to in a somewhat embarrassed manner. Giddens argues that in modern, future-oriented societies interested in change, risk has replaced notions of this kind.

Beck (1992) defines the “risk society” in terms of risks that emerged in the 1960s. “Modern society,” he maintains, “has become a risk society in the sense that it is increasingly occupied with debating, preventing and managing risks that it itself has produced” (Beck 2005: 332). From his perspective, this was “an inescapable structural condition of advanced industrialization.” Central to his theory of the risk society are relations of “risk definition” based on the “power game.” These

relations of definition can be conceived as analogous to Marx's relations of production, with the inequalities of definition enabling powerful actors to maximize risks for "others" and minimize risks for "themselves." For Beck, the concept of "risk" replaces the concept of "class" as "the principal inequality of modern society, because of how risk is reflexively defined by actors." The theory of the world risk society, however, maintains that modern societies are shaped by new kinds of risks and that their foundations are shaken by the worldwide anticipation of global catastrophes. Such perceptions of global risk are characterized by three features (Beck 2005: 334): (1) spatial, as reflected in the fact that many new risks (such as climate change) do not recognize the borders of nation-states and other such entities; (2) temporal, as manifested in the long latency period that are characteristic of new risks (such as nuclear waste), making it impossible to effectively determine and limit their effects over time; and (3) social, as exhibited in the complexity of the problems and the length of the chains of effect, which means that it is no longer possible to determine causes and consequences with any degree of reliability (as in the case of financial crises).

Contrary to the lack of spatiality and borders supported by Beck, I argue the necessity of spatializing the contemporary emerging risks stemming from climate change and environmental hazards (as well as global terrorism and the like) and of situating them in human spaces such as cities, towns, and villages. I also maintain what many city administrators have been learning in recent years: that in order to effectively cope with uncertainties and risks, cities need to become key actors in the process. Indeed, contemporary cities are beginning to emerging as major forces in critical areas such as human security, sustainability, and climate change. Refocusing our analysis on cities increases our chances of understanding specific risk phenomena and the actions required to deal with them. On this basis, in my quest for a *praxis* that is adequate for contending with both risk and its oriented practices, the modern city offers the best setting in which to situate our inquiry. As a result, this shift has the potential to make a substantial contribution at both the practical and the theoretical levels.

I argue that, to a certain extent, cities have always been about coping with risk, as reflected in the following words penned by Aristotle more than two millennia ago: "Men come together in cities for security; they stay together for good life" (Blumenfeld 1969: 139). With the rapid development of technology and modernity, this aspect of cities has intensified greatly, as reflected in their increasing occupation with interrogating, estimating, preventing, managing, accepting, denying, and seeking to manipulate and cope with risks. Indeed, cities have been facing environmental, health, social, and security threats for centuries, and have always strived to reduce risks by means of various spatial, physical, social, and environmental measures.

Since the industrial revolution, cities have been living under a steadily mounting level of risk. This has included climatic and environmental challenges that are independent of climate change, such as the urban heat island effect, by which cities are generally warmer than their surrounding areas due to higher levels of heat absorption and air pollution, and existing climate extremes, such as hurricanes and

typhoons (IPCC 2007; Rosenzweig et al. 2011; The World Bank 2011). In conjunction with these phenomena, the impact of climate change on specific cities will depend on the actual climate changes experienced (such as higher temperatures and increased rainfall) and may vary from place to place. Changes in climate, in turn, will present an array of short and long-term consequences for cities in realms such as human health, physical assets, economic activities, and social systems. Without a doubt, the intensifying crisis in global climate change provides the argument for a shift to cities with even greater currency. Climate change has also resulted in a resurrection of the concept of risk. Giddens (1999) holds that in light of the current climate change crisis, risk assumes a new and peculiar importance. “Risk was supposed to be a way of regulating the future, of normalizing it and bringing it under our dominion,” he explains, although “things haven’t turned out that way. Our very attempts to control the future tend to rebound upon us, forcing us to look for different ways of relating to uncertainty.”

Because of their socio-spatial character and large populations, contemporary cities are more vulnerable to a variety of risks and also have the potential to become generators of new risks, such as failed infrastructure and services, environmental urban degradation, and increasing informal settlements, which make many urban inhabitants more vulnerable to natural hazards and risk (UNISDR 2010). According to Beck, risk may even increase rather than decrease with progress in technology and science.

Cities are also where the vast majority of humanity will live in the coming few decades, as the demography of today’s cities continues to change at an unprecedented rate. While only 29 % of the world’s population lived in cities in 1950, today the figure has reached 50.5 %, and by 2050 is expected to reach 70 %. The urban population is currently increasing at a staggering rate of 1 million people per week (Nature 2010) and, in Europe alone, is expected to rise from 920 million to 1.1 billion between 2010 and 2030. By the middle of the 21st century, the total urban population of the developing world is expected to more than double, from 2.3 billion in 2025 to 5.3 billion in 2050 (Satterthwaite 2007). Some suggest that we are currently witnessing an urban renaissance or a resurgence of cities (Storper and Manville 2006).

The threats stemming from the “manufactured risk” of climate change have been intensified at the urban level, which makes focusing on cities even more critical. According to Giddens (1999: 2), there are two types of risk: external risk, which stems from aspects of nature such as bad harvests, floods, plagues, and famines; and “manufactured risk, which is created by the very impact of our developing knowledge upon the world”. Manufactured risk refers to risk situations which we have very little historical experience in confronting, such as climate change and most environmental risks. Such risks are directly influenced by what Giddens refers to as “intensifying globalization.” In recent years, we have begun worrying more about what we have done to nature. According to Giddens, “this marks the transition from the predominance of external risk to that of manufactured risk.”

As the concept of risk continues to play an increasing role in how societies on various scales understand themselves and their actions and plan for the future, and

as cities begin to emerge as key players in contending with risks of different kinds, we propose the conceptualization of the risk city—which focuses on society, structure, and politics at the city level—as a tool to better understand the urban settings that will soon be home to most of the earth’s population. My theoretical entity, then, is the city: the urban space.

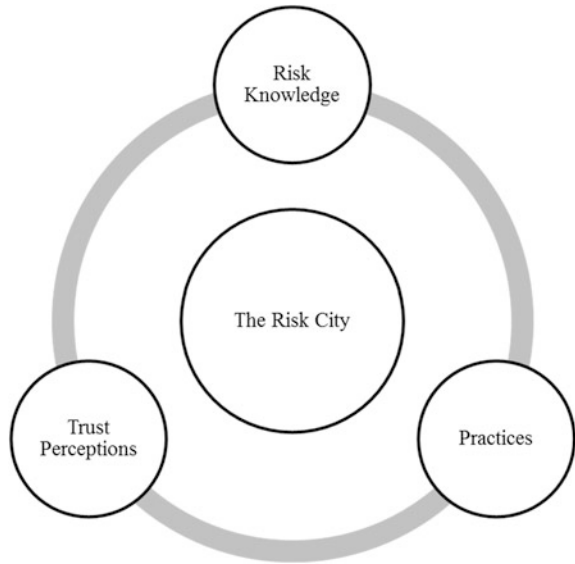
2.2 The Risk City: The Framework

My aim in this book is to develop the theoretical framework of the risk city with the primary goal of filling a gap in the academic literature with a framework that not only theorizes urban risk and its uncertainty and interrogates human risk-oriented practices and planning policy, but also contributes to our understanding of the effect of these practices on urban social issues, particularly those related to social justice. My goal is a praxis that is “a synthesis of theory and practice in which each informs the other” (Hillier 2010: 4–5).

The theoretical framework of the risk city is based on the three primary concepts: risk, trust, and practice. Although it is the coexistence and reciprocal relationships among these interlinking concepts that give meaning to the risk city, each concept plays its own unique role in the framework. In accordance with Deleuze and Guattari’s (1991) approach to the term “concept,” each concept of the risk city is “created as a function of problems” or related to a problem or problems (p. 18), and “has a *becoming*” and a relationship with other concepts situated in the same conceptual framework, or “plane.” As part of one conceptual framework, these concepts are linked to and support one another, articulate their respective problems, and come together to contend with the same problem. Overall, the framework of the risk city is like a plane, a plane of immanence, an “image of thought” with interconnected concepts. After all, concepts, like knowledge, have meaning only in relation to an image of thought to which it refers or a conceptual framework which it serves.

The risk city internalizes risk, trust, and practices, while each concept is internally contradictory by virtue of the multiple processes and heterogeneous components by which it is constituted (see Harvey 1996: 51). As a result, they constitute the risk city as a process that is both contradictory and unstable—a contradictory “thing” that can be understood as the processes and relationships among the concepts that constitute it and which it internalizes. By contradictory we mean “two or more internally related processes that are simultaneously supporting and undermining one another” (Ollman 1990: 49, in Harvey 1996: 52). The uncertainty of the risk city shapes it as contradictory, conflictual, and unbalanced. Thus, in order to understand the risk city we must conceive it as an assemblage of interlinking spatial, political, economic, social, and cultural processes replete with contradictions, conflicts, and sources of power, that together provide crucial insight into the complexity of urban life and settings.

Fig. 2.1 The risk city framework



The constitutive concepts of the risk city are not static but rather under continuous evolution, in a constant state of process. “Every concept has a history,” explain Deleuze and Guattari (1991). Risk, too, has a history, as do trust and planning practices. In fact, Giddens and Beck based their theory on the evolution of the concept of risk from traditional social contexts to the social contexts of modernity.

Based on the contemporary conditions of risk at the city level, I define the risk city as a construct of the interlinked concepts of risk, trust, and practice. The risk city is therefore a construct of *risk*, new evolving conditions, and knowledge regarding the uncertainties stemming from climate change and other perceived dangers. The risk city is also a construct of *practices* and practical frameworks employed by cities in response to the continually evolving and emerging knowledge about risk and uncertainties that stem from climate change and other threats. Finally, the risk city seeks to promote *trust* and a sense of safety among its inhabitants and visitors by producing social and political institutional frameworks and promoting practices aimed at reducing risk and the possibility of risk (Fig. 2.1).

2.2.1 The Risk City as a Construct of Risk

As we have seen, risk and its incessant uncertainties lie at the heart of the conceptualization of the risk city. In this way, risk is the ontological foundation of the framework. The risk city is first about knowledge regarding threats and future uncertainties that are related but not limited to environmental and climate change.

Indeed, risk regulates the present and future of cities by significantly contributing to the mobilization of urban society and its politics, as well as its practices of planning and development.

One major feature of the risk city is that its ontological foundations are rooted in the restlessness of knowledge regarding the risks faced by cities. For the most part, knowledge regarding risk is questioned and challenged not only by the public but by the experts themselves, which means that the risk city exists in the shadow of unstable, challenged, and restless knowledge. Risk is interpreted differently and manipulated by different people with different interests and different backgrounds, which means that knowledge regarding risk is located on inherently restless terrain.

Risk conceptualization in the social science literature is dominated by two perceptions of risk (Beamish 2001; Lidskog et al. 2006). The first is based on a technical or quantitative approach and typically focuses on the regularity and severity of hazardous events as assessed by experts (Jarvis 2007), as scholars calculate probabilities and estimate cost and liability (Crouch and Wilson 1982; Heimer 1985; Petak and Atkisson 1982). In the 1970s and 1980s, academic interest turned to understanding what influences conceptions of risk throughout the general public. This research trajectory has been dominated by a psychometric paradigm that emphasizes individual cognition using presumed “objective” measures (i.e., probabilities) of risk as the benchmark for comparison (Beamish 2001). From this perspective, risk is something that can be measured and observed. It is considered to exist when it can be assigned a probability of occurrence and is otherwise regarded as uncertainty (Gunder and Hillier 2009; November 2008). Renn and Rohrmann (2000: 14) define risk as the possibility of physical or social or financial harm/detriment/loss due to hazard within a particular time frame. ‘Hazard’ refers to a situation, event or substance that can be harmful for people, nature or human made facilities. ‘People’ at risk might be residents, employees in the workplace, consumers of potentially hazardous products, travelers/commuters or the society at large.

We expand this definition to include political harm as well, thus enabling risk analysis at the city level to accommodate political and religious conflicts and their real and possible outcomes.

The field of knowledge regarding climate change has been characterized by marked disagreement among scientists, as well as among political leaders and others from the private sector. While thousands of experts from different disciplines around the world highlight the risks, uncertainties, and effects of climate change, some scientists suggest that others are exaggerating the risks of climate change, or deny the phenomenon altogether. For example, in the wake of the Intergovernmental Panel on Climate Change’s (IPCC) 2007 benchmark climate change report, the Inter Academy Council (IAC) undertook a review of the IPCC’s findings that suggested that the 2007 report “contained exaggerated and false claims that Himalayan glaciers could melt by 2035.” In this way, the IAC, which comprises many scientists, including some from the UK’s Royal Society, issued “a damning report” into the research practices of the world’s leading climate change body and called its credibility into question (Bowater 2010; IAC 2011).

The second perception of risk is social constructivist and qualitative in character. Following Douglas's and Wildavsky's (1982) pioneering work on risk perception, social scientists have argued that risk behaviors and perceptions can neither be understood nor analyzed outside the social and cultural contexts in which they evolve (Sommerfield et al. 2002; Jabareen 2006). Accordingly, some argue that understanding a person's interpretation of risk requires attention to the broader social, cultural, and historical contexts within which interpretation occurs (Beamish 2001; Erikson 1994). The social science literature also suggests that members of the same societal group are likely to adopt certain values and reject others, and this process of adoption and rejection is understood as determining the perceived acceptability of a risk (Snary 2004). In this way, risk perception varies according to historical traditions and cultural beliefs, as well as political and administrative structures (Healy 2004; Jasanoff 1986, 1999; Rohrmann 2006). The constructivist perspective also posits that risk "is not an objective condition, but a social construction of reality, which starts with the question of how people explain misfortune" (Hoogenboom and Ossewaarde 2005: 606).

Consequently, each society has its own conceptions of the risk city based on its own understanding and interpretation of uncertainties, knowledge, political organization and values, political and market powers, and resources. Risk means different things to different people depending on their social, economic, and political capacities and their political allegiances and social conditions. Overall, this helps us better understand different approaches to the risk city as well as differences in policies, planning, and development, and the agendas of sustainability and countering climate change. The underprivileged masses in developing cities, which are home to the vast majority of the earth's population, do not worry about global warming and species extinction, even though, they might suffer more than others from the impact of climate change. They conceive basic risk in different spheres using different terminology. For them, the most prevalent vocabulary for expressing risk conception pertains to food, access to clean water, employment, and urban hygiene.

One problematic aspect of the conceptual framework of the risk city is the fact that risk is "a virtual threat," as posited by November (2008). For this reason, many people, urban communities, cities, and policy makers may not regard the risk of climate change as a serious or urgent matter. From their perspective, many climate change oriented risks may simply not exist or may be conveniently ignored.

2.2.1.1 Power and the Conception of Risk

Risk is about power and resource allocation, and risk conception is a tool of political and social power in our cities. Because risk reduction and treatment entails resource allocation and consumption, politicians and other economic stakeholders typically confiscate the right to reframe risk. Who is it, then, who conceives risk, and who are their receivers and their target audience? Experts and scientists usually reframe risk settings as a science for our societies and urban communities, and powerful stakeholders typically hijack the right to reframe the acceptable level of

risk. Without a doubt, decision makers and politicians prioritize risk based on political, economic, and social considerations. It would be naive to suggest that in their dealings with risk and the risk city, politicians and decision makers consider scientific facts alone. According to Beck (1992, 2005), “even the most restrained and moderate objectivist account of risk implications involves a hidden politics, ethics and morality.” The risk city involves social conflict on local and national levels and is also responsive and reflexive to the international politics and tension along the climate change divide in world politics. After all, as Beck reminds us, “not all actors really benefit from the reflexivity of risk—only those with real scope to define their own risks.”

Cities are willing to accept certain levels of risk and uncertainty. According to Giddens, the “acceptance of risk is also the condition of excitement,” and “a positive embrace of risk is the very source of that energy which creates wealth in a modern economy.” On the contrary, I believe that the acceptance of risks stemming from climate change and other such threats can be quite dangerous for the residents of cities. Indeed, recent evidence emerging from cities around the world suggests that it has simply become too dangerous to continue accepting the levels of risk that have previously been accepted in the arena of climate change.

2.2.2 The Risk City as a Construct of Trust

The risk city negotiates, manipulates, and mobilizes trust whenever it approaches and deals with risk. The emergence of risk demands and is closely followed by the negotiation of trust. Trust is fundamental to the risk city because of its dialectical relationships with risk. Theorists from various disciplines have emphasized the interrelationship between *trust* and *risk* (Beck 1996; Beck et al. 1994; Gambetta 1988; Giddens 1990, 1991; Kelley and Thibaut 1978; Josang and Presti 2004; Luhmann 1979; Molm et al. 2000). For Giddens (1990: 35), “risk and trust intertwine, trust normally serving to reduce or minimize the dangers to which particular types of activity are subject.” Molm et al. (2000: 1402) conceptualize trust as an emergent phenomenon that arises in response to uncertainty and risk. Trust can be defined as positive expectations in the face of the uncertainty emerging from social relations and from the relations between the citizenry and the authorities (Guseva and Akos 2001).

Trust reflects the social and political context of the risk city. It is more than a feeling of safety. It is also about the confidence in a city, its public authorities, and its physical and abstract settings. It is about trusting the city per se, and it plays a critical role in the risk city due to its social function of mitigating uncertainty. Trust is generally understood as a belief in the integrity of others (Ross et al. 2001; Guinnane 2005). Indeed, it is the fundamental bond of human society (Dunn 1984), and, according to John Locke, it is what “men live upon” (Locke 1976: 122). Barber defines trust as “socially learned and socially confirmed expectations that

people have of each other, of the organizations and institutions in which they live, and of the natural and moral social orders that set the fundamental understandings for their lives” (Barber 1983: 165).

Residents of the risk city seek to or are supposed to trust the public authorities and institutions, as well as their various urban systems. In the risk city, trust can emerge in a variety of forms, levels, and scales—from face-to-face exchanges and ascriptions to institutions, physical infrastructures, and technical systems. We want to believe we can trust the subway system to work properly under all circumstances. Giddens (1990: 34) extends the definition to include “abstract principles” (such as technical knowledge) and institutions that relate to modernity and ultimately defines trust as “confidence in the reliability of a person or system, regarding a given set of outcomes or events, where that confidence expresses a faith in the probity or love of another, or in the correctness of abstract principles.”

As a feeling that is central to human existence (Arrow 1972; Luhmann 1979) and a precondition for the existence of any society, trust fulfills important social functions in the risk city. Trust seems to make institutions, markets, and societies work better (Leigh 2006). It also promotes long-term social stability (Cook and Wall 1980), reduces the costs of exchange and transactions (Fukuyama 1995; Schmidt and Posner 1982), and enhances quality of life (Schindler and Thomas 1993). It is at once important for social exchange (Kollok 1994; Molm et al. 2000), an instrument of social control and protection (Barber 1983), and a vital component of social capital (Coleman 1988; Putnam 1995).

I maintain that in the risk city, the involvement of residents in planning and producing their own spaces increases the levels of trust among them. Studies have also found that trust also plays an important role in community development (Cebulla 2000; Dhesi 2000) and collaborative planning (Kumar and Paddison 2000).

Trust is related to the relationships among the public, the people, and their administrative and political institutions. Theoretically, public institutions seek to enhance trust in the face of uncertainty and emerging or anticipated risk. Practically, however, Gunder and Hillier (2009: 59) are correct in their assertion that “human societies increasingly reside in a life-world of fear and anxiety largely constituted by a loss of trust in our own ability and that of our national institutions to both ultimately know and deliver a better world.”

Trust, like risk, is socially and culturally constructed. In the risk city, the feelings and perceptions of trust held by different individuals and social groups differ in quality and intensity. I also posit that different cities are characterized by different conceptions of trust based on its social structure, diversity, and demographic and socioeconomic conditions. Earle and Cvetkovich (1995) argue that social trust is based on judgments of “cultural values,” as individuals tend to trust institutions that, in their judgment, operate according to values that match (or are similar to) their own. These values vary over time according to social context and among individuals and cultural groups. Cvetkovich and Winter (2003) have found a clear correlation between trust and assessments of shared salient values. The literature on trust has shown variation across countries (Knack and Keefer 1997; Uslaner 2002),

between native-born and immigrant groups on the neighborhood level (Leigh 2006), and among cities within the United States (Alesina and La Ferrara 2005).

The absence of trust in the risk city has undesired consequences. Some studies suggest that the absence of trust leads to community and social disorganization, which, in turn, increases crime and delinquency rates (Sampson and Groves 1989; Shaw and McKay 1942). Others conclude that threatening conditions and high levels of disorder promote mistrust and destroy the sense of community (Greenberg and Schneider 1997; Ross et al. 2001; Skogan 1990; Taylor and Shumaker 1990). Convincingly, our study in Gaza Strip concludes that:

Trust relationships are the corner-stone upon which communities are based anywhere in the world. Hence, in order to sustain communities, planners should support trust relationships among residents. This requires culture-sensitive planning (Jabareen and Carmon 2010: 446).

Moreover, elsewhere, I suggest that when it comes into being, risk frays the social fabric of the city, harms the fundamental roles of trust in the urban sphere and enhances the feelings of defenseless and vulnerability. Furthermore, it undermines social stability and quality of life, and harms co-operation among people, it destroys the sense of community and belonging and hurts trust in formal urban institutions and political legitimacy (Jabareen 2006b).

2.2.3 The Risk City as a Construct of Practice

Both trust and risk help shape social practices in the risk city. Giddens (1976) uses the term “double hermeneutic” to refer to the observation that “when scientific concepts become generally accepted as means of making sense of the society, they not only reflect but also construct social practices” (Häkli 2009: 14). In this way, risk and trust not only describe but also construct social and planning practices related to the risk city.

A primary aspect of the risk city is its construction of sociopolitical and spatial practices and frameworks aimed at responding to these uncertainties and countering the worst of them. In this way, it is about “structural arrangements,” “emergency planning,” prevention, mitigation, and adaptation. The risk city, therefore, must be understood as a future-oriented socio-spatial political construct that dynamically mobilizes its various frameworks in an effort to determine its own future rather than leaving it to the hand of fate. The risk city makes positive use of risk conditions to creatively reconstruct itself and to address issues related to the people, energy, and environmental, spatial, and economic development. In the words of Beck (2005: 3), risk is “the modern approach to foresee and control the future consequences of human action.”

The field of practices of the risk city, of which countering climate change is but one, is a complex phenomenon that is non-linear, fundamentally non-deterministic, dynamic in structure, and uncertain in nature, and that is affected by a multiplicity of economic, social, spatial, and physical factors. Planning theories, however,

provide us with no adequate solution for this complexity, and planners and practitioners lack the knowledge and experience necessary to deal with it properly, though many acknowledge the importance of this ability.

The problems with practice-oriented risk are related to the nature of risk itself, particularly its characteristic uncertainty and complexity:

- (a) Because risk is future-oriented in nature and not an immediate or pressing need, it is typically not treated as urgent and is often ignored for long periods of time.
- (b) Risk sometimes has to do with problems that are difficult, if not impossible, to understand and resolve scientifically (Bickerstaff et al. 2008: 1315).
- (c) Because the measures required to address risks may be costly, public authorities either ignore them or deal with them in a minimal manner.
- (d) Because in some cases addressing risk has no immediate political gain, many political leaders choose simply to quietly ignore it.
- (e) Practices that are informed by uncertainties are difficult to design and plan. Although when addressing future risks, practices need to address complexity at the urban level, neither our extant urban theories nor our practical experience provides us with the adequate tools for producing such practices.

Because risk entails uncertainty (indeed, we have no idea when, where, and at what intensity it will actualize itself), it is a phenomenon with which planning has thus far failed to effectively cope. For decades, planning theories, practices, and education have been dominated by linearity. The same is true of the manner in which planning practices have contended with urban problems and threats in even the most advanced cities. Planning still lacks an appropriate approach to complexity, which is something that requires immediate elaboration.

Moreover, as climate change poses new risks and uncertainties that often lie outside our range of experience and that have the potential to affect the social, economic, ecological, and physical systems of any given city (see IPCC 2007: 719), countering climate change in cities is undoubtedly a complex and multidisciplinary undertaking that demands a “paradigm turn” toward interdisciplinary thinking. This, we must acknowledge, has yet to occur.

The concept of “complexity” offers a coherent perspective for organizing our knowledge in a variety of disciplines that has recently come to the forefront (Batty 2007). “Complexity sciences” is an interdisciplinary field concerned with the study of the general attributes of evolutionary natural and social systems (McGlade and Garnsy 2006) that evolved out of ideas associated with dynamic systems—ideas about chaos, nonlinearity, emergence, and surprise. Some argue that cities “are in the vanguard of these developments” (Batty 2007, 1; Marc and de Roo 2010: 93). Complexity driven research has placed a particular emphasis on “structural change driven by non-linear dynamics, as well as exploration of the propensity of complex systems to follow unstable and chaotic trajectories,” and is increasingly viewed as an important step toward the construction of alternative evolutionary schemas (McGlade and Garnsy 2006, 1).

Social theorists borrowed the language of complexity from natural sciences (Urry 2005), and in the urban context, some scholars suggest that complexity thinking can add to our understanding of cities in general and cities of the twenty-first century in particular (Portugali 2010; Urry 2005). McGlade and Garnsy (2006) maintain that the emergence of alternative ways of representing relationships and the complexity of things has also opened up new possibilities in the social sciences, which have been dominated by the search for linear and predictive relationships that require heroic assumptions “that may distort rather than clarify.” Complexity acknowledges “unpredictability and uncertainty, ambiguity and pluralism, and without being entirely relativist, it does throw doubt on the certainty of theory and science that has dominated our thinking about cities” (Batty 2007, 31).

Current approaches to complexity, however, are problematic in the sense that they are primarily quantitative and based on complicated computerized models, while urban phenomena are mainly qualitative in nature. These approaches “do not lend themselves to quantitative-statistical analysis and are thus of little interest to mainstream city complexity theory” (Portugali 2010). Although some qualitative urban phenomena can and have been modeled and simulated by means of complexity, urban phenomena, like the other burning questions facing the cities of the twenty-first century, are all “qualitative,” with no hard data. For this reason, they are not addressed by the mainstream discourse of the complexity theories of cities (Portugali 2010). The potential contribution of complexity theories to the study of cities has yet to be realized.

By nature, working on the complex constructs of the risk city and urban resilience requires “complex thinking and complex methods” (see de Roo and Juotsiniemi 2010: 90). The complexity approach offers a suitable method of generating the kind of insights we seek with regard to the future trajectories of cities. It also forces us to adopt a more holistic view (Batty 2007).

2.3 The Risk City and the Dilemma of Lack

In practice, the risk city can be considered to be in a state of lack, to use the terminology proposed by French psychoanalyst and thinker Jacques Lacan. Because it does not engage in practices to address all types of risk, many aspects of the trust perceptions among city residents go unsatisfied. In this sense, the risk city seeks to provide what people feel they are lacking. I concur with Gunder and Hillier, who introduce the concept of “lack” to spatial planning theories and maintain that “we tend to welcome anything that gives us new positive identity and belief... We especially welcome new concepts and ideas that can somehow give us a sense of control or ‘certainty’ over the contingent complexities of life, including our environment and our future” (Gunder and Hillier 2009: 29). Accordingly, the practices and plans of the risk city are believed to reduce doubt and uncertainty and

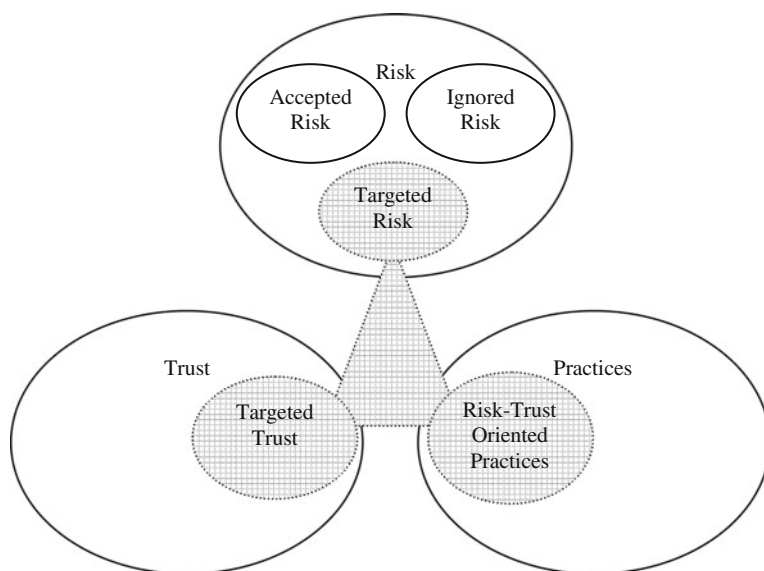


Fig. 2.2 The lack of the risk city

promise certainty in the future. However, these ‘imaginary’ “plans and their prescribed solutions lack” (Gunder and Hillier 2009: 29). The risk city, which lives upon unstable foundations, asks us to “continue to plan for certainty, even if we know—in our heart—that it is merely illusion and rationalization” (Gunder and Hillier 2009: 29).

The risk city does not tackle all type of risk (see Fig. 2.2). In addition to the *targeted risk* that it seeks to address and to mitigate there is also *accepted risk*, which the risk city accepts and agrees to live with without challenging (for various political, economic, and cultural reasons), and *ignored risk*, which the risk city consciously or subconsciously disregards. This has a direct impact on regions of trust in the city, as some are constructed and reinforced through specific practices and plans (both real and ‘imaginary’) while others go untended as a function of the risk city’s decision to accept some risks and ignores others. The shaded areas in Fig. 2.2 represent targeted risk and trust and their induced practices. The non-shaded areas represent the risk city’s “lack”: that is, its unaddressed realms of risk and trust and the corresponding practices in the city that either never come into existence or are never employed.

The concept of “constitutive lack” initially emerged as an ontological concept in the work of Jacques Lacan (Robinson 2005). The basic claim of Lacanian theory is that identity, whether individual or social, is founded on a lack that has social and political consequences because it rules out the possibility of achieving substantial improvements in any area on which this fundamental negativity bears. In this way, it is “ineradicable” (Mouffe 2000). Because of its particular lack—that is, the

regions of trust within its borders that remain unfulfilled, the risk city as a subject will always attempt to compensate through the production of spatial and social planning and practices. This process keeps the risk city dynamic and innovative in the eyes of its residents. According to Stavrakakis (2007: 25).

The idea of the subject as lack cannot be separated from recognition of the fact that the subject is always attempting to compensate for this constituting lack at the level of representation, through continuous identification acts.

There is an emptiness to the risk city left by the perceived lack of security, certainty, sustainability, and trust by which it is necessarily characterized. It strives to fill this gap through social practices and “pragmatic social construction,” through utopian vision and efforts to generate a desirable state (see Laclau 2003).

2.3.1 *The Geographies of the Risk City*

The risk city has its own specific geographies of fear. As some places are more vulnerable than others, fear is differentially distributed throughout urban spaces. Like coastal locations during tsunamis or storms, the risk city also influences peoples’ spatial practices and spatial behaviors. For example, urban residents usually prefer to walk along less risky routes, to avoid familiar sites of crime and violence, and to bypass the enclaves of “others.” As urban crises result in feelings of mistrust between groups, people look to alternative social institutions for spaces of trust (Jabareen 2006). In an abstract way, *spaces of risk* represents the fear of not feeling ‘at home’ and the risk of losing all that is familiar and ordinary, all we have grown culturally and socially accustomed to and take for granted, and all that is unique to us as a collective group, as a community, and, indeed, as a nation.

2.4 The Risk City as a Risking City

Throughout this book, I use the term “risking city” to refer to modern cities’ contribution to human risk in general and to their own risk in particular. From this perspective, the risk city is also a *risking city* due to its modes of production and consumption. Since the Industrial Revolution and the globalization of development, cities have emerged as major producers of gas emissions. Through their production and consumption of energy and materials, they pose a very real risk to themselves and to humanity in its entirety. Some cities, primarily in developed countries, have been promoting environmental agendas, plans, public policies, and actions aimed at lessening the emission of their cities, although these efforts have been limited in their scope and impact. The vast majority of developing countries, however, have failed to exhibit such environmental concerns for an array of reasons stemming from available resources, political structure, knowledge, and high levels of poverty.

2.5 Conclusions

The risk city is a conceptual construct of risk, trust, and practices that sheds light on the contemporary conditions of the risks and uncertainties facing cities and their residents, and the actions that are undertaken (or not undertaken) to cope with them. At the same time, it is a praxis that links theory with practice. The risk city acts to acquire knowledge regarding future uncertainties related to environmental and climate change and other significant risks and to construct socio-political and spatial frameworks aimed at responding to and countering these uncertainties. The risk city dynamically mobilizes its various resources in an effort to determine its own future. In this way, it makes use of the conditions of risk in a positive manner to creatively reconstruct itself and to address people, energy, and environmental, spatial, and economic development. Lack is one of its primary driving forces, as it seeks to win the trust of its residents, but can be only partially successful at doing so. After all, like its constituent components of risk and trust, the risk city is socially and culturally constructed and means different things to different people in different social and political contexts.

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