

RISK PERCEPTION AND RISK MANAGEMENT – CONCEPTUAL UNDERSTANDINGS AND DILEMMAS

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Abstract

The feeling that people and states are constantly exposed to a certain type of danger, or that they are in various critical situations and feel insecurity, initiated the dilemma of how risks are understood and interpreted. There is no doubt that in its essence the risk refers and applies to security, which, among other aspects, is confirmed by its impact in the creation of security policies at national, regional and international level. In this regard, risk is not directly associated with avoiding threats or deterring enemies, but primarily, with the process of managing current and future activities aimed at reducing the vulnerability of specific reference objects (depending on the context) and consequently, with the process of increasing their resistance. So, in a certain way, risk is related to the process of providing an adequate and necessary background for current activities and development, as well as for the future development of approaches and strategies in the security and safety sphere. Starting from such risk complex nature (different meaning in different contexts), through the analysis of risk management objectives and techniques, this paper more specifically explores the conceptual framework of the risk perception, explanation and understanding process.

Keywords: *risk, perception, vulnerability, management, resistance*

1. INTRODUCTION

Recent events in the world have brought risk into a higher profile. It is no doubt that the current war in Ukraine, terrorism, extreme weather events as well as the global financial, health and food crisis, represent the extreme risks that are facing society and world today.

Therefore, a dynamic and changing security environment filled with numerous (new and updated) risks, and thus with a constant insecurity feeling, has initiated a serious number of researchers to open the problem about the way in which ordinary people and policy makers perceive and interpret risks. Actually, the main dilemma in this regard is whether there is a difference in the way of perceiving the risks between them, and what are the reasons for that. Moreover, the initial dilemma arises around the understanding of the very essence of the term risk, within these researches. However, in terms of an individual's position and exposure, risks are mainly viewed as the probability that an individual will be exposed to a danger (Sjoberg, 2004).

A common explanation, relates risk to the possibility/probability of injury, damage or loss (Webster, 1983). Most often, the probability and consequences of a violent act or event are associated with physical (technological) or natural processes according to how and whether they can be objectively defined through risk assessment.

Still, from the social sciences point of view, such understanding is unacceptable, starting from the claim that risk is essentially a subjective category, which means that it also has subjective aspects. Therefore, risk is not only a result of objective measures that are expressed through quantitative indicators (percentages of damage or casualties), and even less can it be claimed that risk exists outside of the social/societal sphere of living.

In fact, the concept of risk is an instrument by which people understand or deal with dangers and uncertainties in life. As a complex phenomenon that makes up modern society or the new security environment, it can hardly be defined solely as an objective or real risk (Georgieva, 2006).

Despite the fact that risk has a real and subjective dimension, another characteristic arises from the fact that it is viewed differently from the point of view of the general public and from the expert point of view, so we can talk about individual and public risks. From the previous research point about risks, we can conclude that the public usually starts from several factors when assessing the. The most common in this regard are: uncertainty, fear, potential danger, consequences for future generations, etc. It means that public tends to have a much broader perspective on how to assess risk. On the other hand, in expert analysis, risk is usually viewed through the prism of expected victims and consequences. Moreover, expert judgment tends to rely on narrow technical metrics such as annual fatalities.

The forms through which risk information is presented also have a significant influence on the approaches to risk analysis. In fact, they represent a framework that has a strong influence on the decision-making processes of the entities that have to deal with the risks. In this context, information about risks can be framed in different forms that reflect the complexity of the risk and its assessment.

It can be noted that the danger, i.e., the threat may be real, but the risk is still in its essence, a social construction. Namely, the process of risk assessment is essentially subjective and complex and it occurs by combining scientific approaches and assessments of psychological, social, cultural and political factors (Georgieva, 2006).

The influence of the indicated factors on the risk perception and understanding is analyzed in more detail in the following section.

2. CONCEPTUAL FRAMEWORK FOR RISK PERCEPTION AND UNDERSTANDING

As mentioned above, definitions of risk can be found in many sources and in many aspects as. Moreover, according to the Oxford English Dictionary, risk is defined as: ‘a chance or possibility of danger, loss, injury or other adverse consequences’, while the definition of at risk is: ‘exposed to danger’ (OED). It follows that risk is used to signify negative consequences. On other hand, the Institute of Risk Management (IRM) defines risk as the combination of the probability of an event and its consequence. Consequences can range from positive to negative, which makes it a widely applicable and practical definition.

In sum, risk may have positive or negative outcomes or may simply result in uncertainty. Therefore, risks may be considered to be related to an opportunity or a loss, or the presence of uncertainty. Actually, every risk has its own characteristics that require particular management or analysis. Every risk has its own characteristics and specific perception approaches that require particular management or analysis.

Perceptions regarding risks are considered a significant factor influencing the decision-making process within the society. Actually, such perceptions influence not only decision-making, but also the behavior of numerous social subjects. Currently, at individual

level, people usually do not respond directly to the risks they are exposed to, but rather respond to their perceptions of those risks. As a result of the complexity of the risk perception process, a number of researches about risk perception and for various biases and distortions that are facing people in this regard, have been initiated in the academic debates during the past 40 years.

Actually, since the beginning of the 80s of the XX century, two conceptual approaches that try to answer the questions and dilemmas related to dangers and risks have been generally developed: the psychometric model and the cultural theory model.

The psychometric model for risk explanation starts from the assumption that people's attitude towards risks is defined by the so-called mental or cognitive models. As example, within our personal and domestic lives, many of the responses to risk are automatic. Our ways of avoiding fire and road traffic accidents are based on well-established and automatic responses (Hopkin, 2017).

Regarding to this model, Slovic points out that the risk is subjectively defined by the individual, who is often influenced by a multitude of psychological, social and institutional factors within this process (Slovic, 2000). The main challenge in this context is the dilemma of how to measure those factors as well as the way in which they influence perceptions. The sets of factors identified by Slovic, can be broadly combined into two categories, because many of the factors are strongly correlated with each other. Factor one (called dread risk) and factor two (called unknown risk) can then be used to differentiate hazards. From this aspect, situation in which dread and uncertainty are high, the precautionary principle combined with social discourse, become important approaches, while, situation where dread and uncertainty are low, is the traditional risk-based approach suitable by itself (Etkin, 2016).

However, research within this model indicates that by ranking most hazards that can be interpreted as standard risks and by measuring factors such as: old risks, new risks, level of fear, and number of individuals exposed to the risk, we can explain the risk perception and risk tolerance.

Although such model for explaining risk perception is becoming widely accepted in the past period, it still faces certain criticism, especially in terms of its shortcomings. Namely, one of the criticisms is that the model does not include the connection of the basic relationship between the risk dimensions on one hand and the perceived level of risk, or risk tolerance, on other hand. A further criticism is that the model does not account for the social and political factors that influence the way the public will perceive risk.

On the other hand, instead of the individual, the focus of the cultural model/theory in the risk explanation is placed on the context, and on the concrete situation in which a specific social structure is revealed as well as on the specific cultural order. In fact, according to such model supporters, it is precisely the complex shaped context that should be the starting point in analyzing and understanding reactions toward risks. A significant cultural theorists' contribution is the pointing out of the significance of the group and the wider social context in the risk perception. Actually, the basic thesis of this model is that the roots of acceptance or rejection of risks and risk phenomena are mainly determined by different patterns of cultural beliefs. It practically means that individuals, even when perceiving risks, simply follow the general patterns of the culture to which they belong. Hence, the reasons for the different ways of perceiving and reacting to risks, should be sought in the specific cultural patterns of each social environment. As an example, there is a different degree of acceptability of the same risks in different cultures. Actually, in factors analysis that determine the risk perception within this model, there are two key terms. The first one or

group cohesion, refers to the degree to which people depend on the attitudes of the group as well as to the identification degree with the group identity. The second one or the so-called the grid term, is more specific and indicates the degree to which a person accepts and respects the formal hierarchical composition and procedural rules of behavior in the group and in the society.

In sum, through the cultural model, an attempt is made to understand the culture influence (norms and values that are created between members of certain social groups) on risk perceptions. This process can be significant for a more adequate understanding of risks from two aspects: first, if it analyzes how culture affects individual perceptions of risk, which may be objective, and second, if it analyzes how its capacity affects the creation of the risk perception through the social construction process.

The assimilation and contrast theory of risk perceptions offers an additional conceptual framework for understanding the ways in which the public perceives risks. Within this approach, Sjoberg points out three significant factors that determine the perception of risks:

- Individual personality variable - stems from the fact that people often see risks as big or small ones, which points to the existence of different sensitivities about risks;
- Risk generating agent - highlights the attitude towards the entity that generates the risk and in principle this factor is related to ideology; and
- Specific fear character - which is related to the fact that to some risks and dangers (radiation, disease, etc.) people feel a greater fear factor than to others ones (Sjoberg, 1998).

The analysis of risks and their perception by individuals or groups is important from several aspects, especially because the level of perceived risks is closely related to the requirements of subjects for risk reduction. However, previous research suggests that risk reduction requirements are less related to the intensity of risk perceptions or the likelihood of harm. On the contrary, public support and demand for risk reduction are more related to the strength/severity of consequences.

As a result of such different approaches in risk perception and understanding, it is no doubt that the concept of risk should be accepted and understood in a complex way. A basic assumption arising from such understanding is that no activity is immune to risk, nor that risk can be eliminated entirely. In fact, it can only be reduced to some acceptable level.

3. FROM RISK PERCEPTION TOWARDS RISK MANAGEMENT

Providing a suitable definition of risk management is as difficult as providing a suitable and universally accepted definition of risk. Because it is commonly accepted that risk management should be concerned with the hazards, uncertainty and opportunities, a description and definition is required that reflects the broad scope of risk management activities. However, historically, the term risk management has been used to describe an approach that was applied only to hazard risks, while in contemporary point of view, risk management is mainly based on the wide set of activities undertaken to deliver the most favourable outcome and reduce the volatility or variability of that outcome.

There are several significant aspects related to the risk management process. The first, refers to the fact that risk is understood as the probability that an injury can be caused by an identified hazard. In this context, risk assessment needs to be understood as a dual process. On the one hand, possible dangers for the subject should be identified, and on the other hand, its vulnerability should be assessed in relation to the identified dangers.

Such process, includes several phases:

- identifying hazards - is a process in which forms of hazards are recognized (internal, external, natural, technological, military, etc.);
- vulnerability analysis - is an assessment of the impact of a certain hazard on the subject, but also on the crisis management system;
- impact assessment - can be done from several aspects (social, political, economic, impact on the natural environment); and
- risk mitigation - is related to the establishment and observance of certain rules and procedures that will reduce the risk. In fact, risk reduction has 4 main goals: 1) eliminating the hazard; 2) risk reduction; 3) reduction of consequences; and 4) reducing the spread of risk (Laughly, 1990).

Such indicated phases and objectives further emphasize the complex nature of the processes of risks perception and management. Hence, the risk analysis should be aimed at evaluating the frequencies and the consequences of the risk, while the control of the risk should be based on the use of methods to reduce the frequency of the occurrence of the hazard or to reduce its consequences. Actually, risk analysis is a qualitative problem-solving approach that uses various tools of assessment to work out and rank risks for the purpose of assessing and resolving them.

According to Hopkin, the main activities associated with risk management are as follows: 1) recognition of risks; 2) rating of risks; 3) ranking against risk criteria; 4) responding to significant risks; 5) resourcing controls; 6) reaction (and event) planning; 7) reporting of risk performance; and 8) reviewing the risk management system (Hopkin, 2017).

Such indicated activities point to the conclusion that the success of risk management can be ensured only if the key dependencies are analyzed, monitored and reviewed. In this context, risk management tools and techniques will assist with the management of the hazard risks, control risks and opportunity risks that could impact these key dependencies.

Bearing in mind such dynamic risk management nature, it can be stated that it is a process of daily decision-making in relation to the identified hazard and taking all practical and reasonable measures to minimize the impact of such danger (Gordon, 2001).

Thus, while the risks assessment is related to the identification of dangers and the assessment of their potential impact on the entity, risks management is based on determining the impacts on the possible activity of the entity that may cause negative consequences. Essentially, the purpose of risk management is to provide a systematic means of predicting potential losses as well as selecting the most effective means of reducing losses.

In this regard, the following main objectives of risk management should be highlighted: ensuring personal safety; reducing losses in terms of facilities and services; reducing negligence; and public risk reducing. Hence, risk management (in a broader sense), deals with four types of losses: 1) individual losses; 2) losses in relation to ownership and property; 3) management costs; and 4) legal losses/consequences (Georgieva, 2006).

Regarding the risk management techniques, two basic approaches are generally distinguished: 1) risk control (with an emphasis on measures to minimize potential losses) and 2) risk financing (which means accepting the exposure and financial responsibility for the losses).

Risk control represents the most acceptable solution because risk control techniques are intended to reduce the probability and consequences of losses that can cause hazards. There is a range of controls that can be applied to hazard risks. The most convenient

classification system is to describe these controls as preventive, corrective, directive and detective. Preventive controls are designed to limit the possibility of an undesirable hazard event occurring. For example, the majority of controls implemented in organizations in response to hazard risks are preventive controls. Corrective controls are designed to correct undesirable circumstances and reduce unacceptable risk exposures. Such controls provide a key method whereby the risk is treated so that it becomes less likely to occur and/or the impact is much reduced. Actually, in general terms, corrective controls are designed to correct current situation. Directive controls are designed to ensure that a particular outcome is achieved. They are based on giving directions to people on how to ensure that losses do not occur. They are important, but depend on state and people following established security and safety systems of functioning. Detective controls are designed to identify occasions when undesirable outcomes have been realized. Their effect is, by definition, 'after the event' so they are only appropriate when it is possible to accept that the loss or damage has occurred (Hopkin, 2017).

From such perspective, risk management is a continuous process where risk control measures are regularly reviewed to ensure that they are in place and functioning as intended. It is necessary because the conditions can change and result in the emergence of new risks, or the existing risks can be changed as well. If this is the case, it is necessary covering them by the risk assessment process and in terms of evaluation for future actions. Actually, an effective risk management means attempting to control, as much as possible, future outcomes by acting proactively rather than reactively. Therefore, effective risk management offers the potential to reduce both the possibility of a risk occurring and its potential impact.

In fact, risk management structures should be tailored to do more than just point out existing risks. Moreover, a good risk management structure should also calculate the uncertainties and predict their influence on a security. Consequently, the result is a choice between accepting risks or rejecting them. Acceptance or rejection of risks is dependent on the tolerance levels that a security policy has already defined for itself.

4. THE RISK CONCEPT AND EMERGENCY MANAGEMENT

An introduction of the risk concept in a wider theoretical and research framework, made it possible to approach the ways of dealing with risks more broadly. At the same time, risk management, as a term and as a concept, is increasingly used within the framework of managing emergency situations or emergency management. A basic goal of emergency management is to enable efficient delivery, that is, the provision of basic services to the concrete population. In this regard, a key assumption within emergency management is that for services to be effective, they need to be delivered successfully and on time, through an established delivery system. Hence, it is necessary to identify the risks in a timely manner, as well as to assess the social aspects and consequences of the disasters. In this context, disasters are generally perceived as events that by their nature can affect the entire population, as well as all aspects of economic and social activity. Still, it should be stated that at the same time, the disaster can have a different impact on different groups as well as on the needs that will arise from the impact. Hence, monitoring and determining the various needs has a significant impact on the planning process.

Overall, the contribution of the risk management concept to the emergency management process is based on two key elements: community and vulnerability. However, the use of the terms community and vulnerability is often unclear or even contradictory. In the theory and practice of risk management, such situation is counterproductive because it

makes it impossible to assess the resilience of communities to certain types of hazards and disasters.

The term community in practice is usually associated with people living in a defined administrative unit typically for local government units. However, it should be emphasized that the community should not be defined exclusively by its administrative boundaries. Buckle defines community as any group of people who have something in common, something they share (Buckle, 2003). Thus, resilience is the capacity to withstand damage or to rehabilitate from injury and damage.

Characteristic types of communities relevant to the process of risk management can be those that connect the fact that they are located in an area that is exposed to dangers (airport, dams, etc.), as well as communities that are characteristic according to age, gender, etc. (young old, men - women, risk groups, etc.). There is no doubt that their needs are as different as their vulnerability and resistance to certain types of hazards and disasters. In fact, needs represent a key concept in planning in the risk management process.

The process of identifying communities exposed to risk, also points to the need to assess the vulnerability and resilience of communities. Moreover, vulnerability, like risk, is not a homogeneous category, both in terms of social and geographic characteristics. According to Buckle, there are several significant categories of vulnerability, such as (Buckle, 2003):

- lesser or greater ability to satisfy one's own needs;
- resource availability;
- cultural norms and values;
- access to services;
- social marginalization; and
- previous stressors.

Neglecting these factors leads to a wrong vulnerability assessment, and therefore also to ineffective emergency management. Hence, vulnerability and needs must be acknowledged and interconnected in a proper planning process.

From a strategic point of view, emergency management does not consist only in adequate understanding and caution towards risks and dangers, but moreover includes: understanding the range of impacts of disasters and consequences, as well as understanding the relationships between natural, political, social and economic factors that influence the shape and frequency of risks, the nature and location of disasters. If they are not connected in this way, it is not possible to develop a comprehensive approach to hazards and disasters and their effective management.

5. CONCLUSION

A public perception of the risks has a significant impact on the way priorities will be determined, that is, on what will be considered a priority threat. The analysis in the paper shows that the public generally bases risk perceptions on subjective and often hypothetical assumptions. However, this does not mean that the public perception of risks is always irrational. As the analysis in the paper shows, the shape of public perception is determined by several factors, such as: technical characteristics, social characteristics and psychological characteristics of risks. The challenge in this context is related to the possibility of neglecting some of the indicated factors during the risk analysis. On the other hand, experts base their risk assessments (and should base them) on research into the factors that characterize real risks, with the principles of: objectivity, analyticalness, comprehensiveness and rationality being particularly significant. The main challenge in this regard is related to the trust degree in the experts and in the institutions responsible for risk management.

However, there is no doubt that as a result of the research so far and the progress in the risk assessment process, the very concept of risk has been placed in a broader paradigm. Namely, in contrast to the previous, exclusively technological conceptualization, with which risk is seen as an objective function or probability (uncertainty) and as unwanted consequences, within the new paradigm, risk is set in a different way. Moreover, in the new paradigm, the subjective and value aspects and the nature of the risks are emphasized more and more. Therefore, the process of defining and assessing risk is explained as a process in which the rules must be determined within the socially agreed and accepted norms in the context of the specific problem.

Risk management is an important process because it empowers security providers and policy makers with the necessary tools so that they can adequately identify and deal with potential risks. Once a risk has been identified, it is then easy to mitigate it. In addition, risk management provides a security providers and decision makers with a basis upon which it can undertake sound decision-making.

In addition, progressive risk management ensures risks of a high priority are dealt with as aggressively as possible. Moreover, the management will have the necessary information that they can use to make informed decisions and ensure that the security remains at the projected acceptable level.

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