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# **THE WAY PEOPLE AND SOCIETIES PERCEIVE THE NATURE AND CONTEXT OF RISK IS DIFFERENT, DUE TO PSYCHOLOGICAL AND CULTURAL ISSUES**

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## **ABSTRACT**

Risk perception, is the people's judgments and assessment of dangerous situations that might impose threats to their well-being. However, the way in which people and societies manage the risks, has the special feature of the selectiveness, as to what risks peoples and societies, actually gives rise to concern.. This paper will examine the factors which lead to the different ways people perceive the nature and the context of the risk from a psychological, national and personal cultural perspective. From the psychological point of view, risk perception process is based on the people's danger experience and how the information about the source of risk is communicated in people's psychological mechanism. This psychological mechanism is the one which is responsible for posing uncertainty to people. Moreover, the psychological and cultural studies on how people and societies really assess risks have been shown that people, anywhere in the world regardless of their cultural background, use particular criteria to form their own opinion about risks. Despite this, the effectiveness of these criteria in the public

opinion-forming differs considerably, according to people's social group and their personal characteristics and dimensions.

**Keywords:** risk, perception, culture

**JEL Classification:** Q3, Q4

## **Introduction**

Risk, is defined as *“a situation or an event in which something of human value has been put at stake and where the outcome is uncertain”* (Jeager et al., 2001, p.16). However, some risks may alarm people or engender people's concern while other risks may willfully or unconsciously be ignored by people and societies. Risks understandings and actions are informed by psychologically, culturally and socially structured conceptions about the world.

According to psychologist risk perception is *“a collection of notions from which people form their own risk sources relative to the information available to them and their basic common sense”* (Aven and Renn, 2010, p.94). It is important to highlight that people's behaviour is not driven by the facts but primarily by the perception. Specifically, psychologists claim that perceptions are formed by factors such as social communication, personal dimensions and the cultural traditions (Jeager et al., 2001).

It implies that people's risk perception is multidimensional with a particular risk having different meanings, nature and context to different people (Slovic, 2000). This paper will examine the factors which lead to the different ways that people perceive the nature and the context of the risk from a psychological, cross-national and personal cultural perspective.

## **Current risk debate**

While environment and human beings always have been exposed to potential risks, which come from technological products or from natural events, it is only in recent years that society started to become concerned and see these risks as a real issues (Renn, 2004). So what are the factors that influenced societies to recognise the risks as a social problem in the modern world?

It has been argued by Aven and Renn (2010) that the lack of human knowledge in the past years led people to perceive any negative result as a fate or as a punishment by God, rather than as a result of human behaviour. This approach has changed through the years, as people's knowledge improved and helped them to understand that these negative results are not a punishment from God for their sinful behaviour or fate, but, caused by human actions.

Moreover technological improvement in recent years and more specifically in the pharmaceutical industry has resulted in the reduction of the proportion of natural risks e.g. diseases. Around a hundred years ago people used to accept premature deaths from diseases in the same way as they accepted the natural disasters, as fate. Furthermore, Hohenemser (1983, as cited in Renn, 2004), argued that in the past, any accident or any risk related to an environmental event, received little attention by society, whereas nowadays accidents or diseases such as cancer are seen as personal risk factors of the modern industrialized society.

The high pace of change in both social and technical aspects of life has heightened the general feeling of uncertainty. The past can't work as a guide for people's future. Moreover in a world which becomes increasingly globalized people start to feel that they have less control over their lives. All these factors influence the society to recognize risks as a significant social issue in the modern debates (Newby, 1997). Nonetheless, the way in which societies manage the risks, has the special feature of the selectiveness, as to what risks peoples and societies, actually gives rise to concern. This special feature led people and societies to have many conflicts and public debates whether a risk must really be acceptable and seen as a threat by society or not (Douglas and Wildavsky, 1983).

For example a big conflict in the public risk debates is whether the technological trend which is increasing the negative result of a potential disaster while simultaneously reduces the probability of it to occur, is acceptable or not. The risk of a huge disaster may be accepted by society in order to keep the personal probability of harm to a minimum level, while having an economic benefit (as through this an economic of scale can be achieved). An example of this technological trend is the nuclear energy generation which increases dramatically the negative result of a potential disaster while at the same time it is cheaper and reduces the daily personal and environmental damage. Several people and societies oppose nuclear power whereas some other societies are in favour of a nuclear plant and they financially support this idea (Renn, 2004).

### **Proposal for a taxonomy of social science approaches to risk**

The sociological perspectives on risks include undesirable events that are socially defined 'Real' results are perceived according to social values values and interests (Bradbury, 1989; Shrader-Frechette, 1991; Wynne, 1992; Luhmann, 1993; O'Malley, 2004 as cited in Renn, 2008). Possibilities for future events are not confined to the calculation of probabilities, but encompass group-specific knowledge and vision. Furthermore, possibilities are shaped by human interventions, social organizations, and technological developments (Freudenburg, 1989; Short and Clarke, 1992). Ignoring the connections between social organizations and technological performance may seriously

underestimate or – under different circumstances – overestimate the likelihood of failures. Lastly, reality is seen as a system of both physical occurrences (independent of human observations) and constructed meanings with regard to these events as well as to abstract notions, such as fairness, vulnerability, and justice (MacLean, 1986; Linnerooth-Bayer and Fitzgerald, 1996).

What is missing at this point, is a clear concept of how these factors influence social judgments about risks, individual behaviour and institutional responses (see, for example, Hutter, 2006).

Notwithstanding the frustrations that are likely to evolve when sociologists and cultural anthropologists try to classify different schools of thought, the literature offers a wide variety of taxonomies, even in the narrow field of risk and disaster research (Kreps, 1987; Bradbury, 1989; Stallings, 1990; Renn, 1992; Short and Clarke, 1992; Vlek, 1996; Jaeger et al, 2001; McDaniels and Small, 2004; Zinn and Taylor-Gooby, 2006). They use different frameworks and classification criteria. All sociological and anthropological concepts of risk, however, do have in common the notion that ‘humans do not perceive the world with pristine eyes, but through perceptual lenses filtered by social and cultural meanings, transmitted via primary influences such as the family, friends, subordinates, and fellow workers’ (Dietz et al, 1996, p. 46).

Rather than evaluate the existing reviews, this chapter ventures to add an additional taxonomy, shown in Figure 1 (based on an earlier version in Renn 1992 and a similar approach in Zinn and Taylor-Gooby, 2006). This taxonomy orders sociological and anthropological approaches with regard to two dimensions: individualistic versus structural (x-axis), and realist versus constructivist (y-axis) approaches. The major reasons for this classification are as follows:

- The classification is simple and straightforward and, thus, open to criticism.
- The classification allows using the questions of this comparative review as a structuring tool (constructivist versus realist is associated with the question of how uncertainties are framed as objective properties or as subjective expectations; individualist versus structural is related the context of aggregation).
- Most, if not all, social science concepts of risks can be grouped within the boundaries of these two dimensions.
- The two dimensions appear to be sufficient to distinguish between concepts that are clearly distinct from each other.

There are six social science based theoretical approaches to risk that are covered in this review ([see a similar suggestion in Zinn and Taylor-Gooby, 2006): the rational choice approach (Jaeger et al, 2001; Renn et al, 1999); the reflexive modernization approach by Beck (1986) and Giddens (2000); the systems theory approach of Luhmann (1993); the critical theory approach based on the seminal work of Juergen Habermas (1984, 1987); the post-modern perspective introduced by Foucault (1982) and further developed by Dean (1999) and others; and a cultural theory approach, originally introduced by Douglas (1966) and Douglas and Wildavsky (1982), recently represented by Adams (1995) and Lupton and Tulloch (2002). These approaches are described in more detail in the following sections.

### **Critical theory**

Critical theory, especially Jürgen Habermas's (1984, 1987) theory of communicative action and of communicative competence respectively, criticizes modernity that underlines the contradictions and untoward results of advanced or late capitalism. Critical theory reflects partially a systems perspective, but considers an overarching rationality that connects the different rationalities of the social systems and the institutions in a pluralist society. Critical theory proposes that because of the decline in the Enlightenment belief in a universal rationality, new social norms and values have to be generated. The primary aim of these emergent elements of rationality is to provide collective orientations that do not conflict with personal aspirations and agency (Habermas, 1991; McCarthy, 1973 as cited in Renn, 2008).

Risks have appeared as dominating phenomena demanding political intervention and management. Decisions by the political system, based on the exercise of power – rather than, e.g., a fairness doctrine – result in an inequitable distribution of risks. According to this theory, the optimal solution to address this imbalance is to create a forum for open discourse, where all actors have the chance to argue their interests and where thus conflicts are resolved in an equitable and rational manner. The process of discourse must be fair, transparent and truthful (Renn 2004b). In critical theory risks are seen as real phenomena caused by structural forces such as capitalist systems. These real risks are not always obvious to the observer but can only be reconstructed in collective discourses (therefore the left top position) (Renn, 2008).

*Critical theory is not specific about the three guiding questions about outcomes, uncertainty, and aggregation. Its main message is that outcomes and side-effects of human action can be addressed by a comprehensive discourse linking instrumental, normative, expressive and communicative rationality. The world of RAP is only one element of this overarching rationality that includes socially*

*rewarding experiences beyond individual utility. Altruistic considerations play a role as well as personal relationships and cultural bonds.*(Renn, 2008 p. 8). Critical theory assumes the possibility and fruitfulness of meaningful interaction between systems and between risk creators and risk bearers. Societies can effectively deal with complexity and contingency of risks if the settings and political conditions for discourse are appropriate. One can consider though, that *uncertainties can managed by methodological rigidity when it comes to factual uncertainty, by truthfulness and openness when it comes to behavioural uncertainty (what will people do?), and by consistence and ethical justification when it comes to normative uncertainty* (Renm, 2008, p. 8).

### **Psychological perspective of risk perception**

From the psychological point of view, perceptions have their own reality: just like the animated films where the characters are suspended in mid-air and they don't dip in the ground until they realize their difficult situation, people build their own reality and define the risks according to their own subjective perceptions. This instinctive risk perception process is based on the people's danger experience and how the information about the source of risk is communicated in people's psychological mechanism. This psychological mechanism is the one which is responsible for posing uncertainty to people (Aven and Renn, 2010).

### **Risk perception models**

Aven and Renn (2010) through psychological risk perception studies have identified a number of risk perception classes/models used by society:

- Risk as a fatal threat
- Risk as fate
- Risk as a test of strength
- Risk as a game of change
- Risk as a game of change

*Risk as a fatal threat:* This category includes technical risk sources which can cause a disaster and can have catastrophic results on humans and on the environment in the event of an accident e.g. nuclear power plant, LNG storage facilities. Furthermore, these events theoretically, occur randomly at any time although the probability for such occurrence is extremely low. However, the probability seems not to matter as the random nature of such events, pose onto people the feeling of threat and powerlessness. This is because human beings instinctively feel more comfortable and more able to cope with threats which can

be predicted and so they are prepared for it, rather than threats which are unpredictable, regardless the probability of an occurrence. For example, more people are commonly afraid and feel more threatened by dangers which may occur at night rather than during the day, despite that the number of threats which may harm people during the day are considerably higher than at night. This happens just because people feel that they are not prepared for these dangers, as the dangers which arise during the night are more unpredictable than the regular basis dangers arise at the day.

*Risk as fate:* This category includes the natural disasters with catastrophic effects which is commonly seen by human beings as unviable events, but also seen as God acts or nature quirks (as fate can be find only in religion or in mythology). Contrary to technical risks which are seen as the result of human actions or decisions, natural risks are seen as inevitable fate. As people believe that no one else but God is responsible, the only alternatives considered are either to deny its existence or to flee from these risky situations. In addition, when an event is more frequent, people tend to flee from the risky zone while, when the event is rarer, people tend to deny it. In contrast with the technical risks where the event's random nature act as a fear triggering factor, in natural risks this random nature provide psychological amplification that the risk doesn't exist.

*Risk as a test of strength:* When, despite the high level of risk, people drive faster than the speed limits, they do activities such as falling from a cliff top or a mountain with only a protection of a pair of artificial wings, the term of risk, takes on a completely new dimension. In this situation, the risk is not just the acceptable factor to the pleasurable benefits but it is the benefit itself. The involvement of high level of risk is what actually makes this kind of activities attractive. So in this situation, people bear this high level of risk in order to test and define their own strengths. Risk as a thrill has a number of specific attributes: Voluntary involvement; Personal control of the respective risk; Social recognition for the ability to overcome the risk; the ability to exercise the appropriate skills and prepare oneself, for a risky situation.

*Risk as a game of change:* Risk as a game or thrill includes risky situations where the possibility of winning a profit or having a loss depends on the player's ability to cope with these risky situations. The factor which actually produces the certain thrill in this category is not the game itself, but the possibility of a big win/reward. Moreover, the fact that always there is a big winner incites the feeling that we could be the next. However, the players will be involved in this risky situation only, if the stake is below the player's pain threshold and additionally, the main prize is particularly attractive.

*Risk as an early warning indicator:* The increasing number of reports published on the environmental pollution and its chronic impact on nature and human life led the scientific risk assessment to adopt in recent years, the role of an early warning indicator. The scientific studies in this risk perception model help the early discovery of the dangers created by factors such as the food additives, the animal and plant genetic manipulation. This risk perception is related, to the need to identify the causes for dramatic consequences such as childhood cancer and forest dieback. However, lay people do not use the probability in order to evaluate and to make their judgments about the level of such risks. For example, it is impossible to give someone a plausible explanation that despite the risk assessment, by the U.S Department of Energy that more than 28,000 humans will suffer from cancer within the next fifty (50) years (as a result from Chernobyl), the individual probability has only risen by 0,002%.

### **Psychological assessment values for perceived risks**

According to Renn (2004), the majority of the lay people, in contrast with experts, do not use only the probability and the severity to evaluate and to make their judgment about the level of the risks but they also use some other characteristics. Slovic, Frichhoff and Lichenstein (1980, as cited in Breakwell, 2007) published a psychology research which covered ninety different hazards and eighteen different characteristics which may people use to evaluate the risks. Slovic, Frichhoff and Lichenstein study, demonstrates that the characteristics used by lay people to estimate the risks are mainly influenced by three factors.

The first factor which they labelled was the “dread” in the sense of how catastrophic and fatal the hazard is, how uncontrollable and hard to prevent is, whether it’s involuntary or not and how dangerous for the future generations the potential risk can be. The second factor which they labelled was the “knowledge” about the risk. This “knowledge” factor of the risk refers to whether the exposure to the risk is chronic or it is new and unknown to those exposed. It also covers the immediacy of the consequences and the observability. The third factor is related to the “magnitude” of the risk and the number of the people affected from it (von Winterfeld and Edwards, 1984, as cited in Boholm, 1998).

An earlier study by Renn and Rohman (2000, as cited in Aven and Renn, 2010) who also examine the psychological factors which influence people’s perception of risk results in the follow list which illustrates the important compound factors:

- Familiarity of the risk
- Personal ability to control the level of the risk

- Risk Voluntary acceptance
- Capability of the risk to cause a catastrophic disaster
- Sensory perception of hazard
- The certainty of the risk having a fatal impact (dread)
- Highly dangerous for the future generations
- The feeling of the fair risk and benefit distribution
- The level of the trust in organization operated risk management and control
- Collective or individual experience with the nature and technology
- Risk information clarity

These qualitative factors give us an important explanation of the fact that the sources of risk which the technical assessment of risk identify as low risk, are actually these sources which give rise to greatest concern among people. Sources of risk which are considered as controversial such as nuclear power generation are loaded with very negative attributes whereas leisure activities are linked with more positive attributes (Jungermann and Slovic, 1993, as cited in Aven and Renn, 2010).

### **Cultural perspectives of risk perception**

The wider recognition that risk perception is closely related with cultural and social factors and the huge number of empirical evidence coming from the psychological researches, have supported the perspective that the psychological personal based studies of social attitudes, can be considered for only a part of the risk perception analysis. The notion of a society, as a non-differentiated risk perceiving entity is nowadays accepted to be, a misconception: always a society consists by many different groups with completely different attitudes regarding what actually risk is (Pidgeon and Beattie, 1998, as cited in Bickerstaff, 2004). Over the past decades, scientist such as geographers, sociologists, anthropologists achieved to give a deep contextualization of the meaning regarding the risk perception by approaching risk perception from a socio-cultural point of view (Bickerstaff, 2004). The following section illustrates the

personal and group differences which influence the perception of risk as they have emerged from the socio-cultural studies to different social groups and cultures.

### **National culture and perception of risk**

Many studies about the public risk perception have looked into whether the geographical factor is linked with the hazard perception. According to Renn and

Rohrann (2000, as cited in Avven and Renn, 2010) people anywhere regardless of their nationality consider specific criteria to form their opinion about risks. Nonetheless, the level of these criteria effectiveness, in the opinion forming about the risks, extremely varies regarding the national culture.

For example, an international scale study regarding the risk perceptions in USA and Hungary, reported that across different people in USA, factors had been shown to be stable while the comparison between the results in USA and in Hungary have shown a lot of differences in many dimensions. For example in Hungary, people have a greater concern for common risks such as home appliances and railroads whereas in USA, people have a greater concern for technology risks such as chemicals and radiation (Englander, 1986, as cited in Breakwell, 2007).

Wildavsky (1993, as cited in Breakwell, 2007) argued that the factor which contributes to the forming of this differentiations (differences in the motivation of taking a risk and the forming opinion about the risks) is not primarily the fact that people belong to different nationalities but because people belong to different social groups with completely different world views, and general values.

### **Socio-culture perception of risk-cultural theory**

According to sociologists and the cultural theorists of the risks, the variation of people's judgement about the risks, across the national boundaries, can be explained only by society's structural forces such as rationalities and beliefs of the miscellaneous actors in society

(Douglas and Wildavsky, 1982, as cited in Renn, 2008). This point of view is illustrated by the cultural theory which also highlights the fact that, what actually societies recognize as risky, is not determined by nature but by socio-cultural factors. Hence, there will be sufficient differences in how people from different nationalities who belong to different social groups judge and perceive the risks (Breakwell, 2007).

According to Renn (2008) these groups prioritize the risks and choose what to fear according to which of these hazards threaten their values, their world views, their attitudes and their way of life. Renn (2008) suggested that there are five types of cultural biases: the entrepreneurs, egalitarians, bureaucrats and atomized individualist. These five biases differ according to their level of group cohesiveness (the degree to which a person identifies with a social group) and the level of grid (the degree to which the hierarchy system and the procedural regulations are acceptable and respectable from someone).

*Cultural theory of risk*

Similar to the post-modern thinkers, cultural theorists of risk treat risks as social constructs that are determined by structural forces in society. Issues such as health threats, inequities, fairness, control and others cannot be determined by scientific analysis, but only reconstructed from the beliefs and rationalities of the various actors in society (Douglas and Wildavsky, 1982; Rayner, 1990, Thompson et al, 1990; Grendstad, 2000).

The fabric and texture of these constructions reflect both the interests and values of each group or institution in the various risk arenas and the shared meanings of terms, cultural artefacts and natural phenomena among groups. Risk policies result from a constant struggle of all participating actors to place their view of risk on the public agenda and to impose it upon others.

Several sociologists and anthropologists have attempted to distinguish typical combinations of values, world views and conviction to form what they call 'cultural prototypes'. These groups represent different cultural groups in society with specific positions on risk topics as well as corresponding attitudes and coping strategies. Four or five prototypes that represent have been defined: entrepreneurs, egalitarians, bureaucrats, atomized individuals, and (in some publications) hermits (Thompson, 1980). They differ in their degree of group cohesiveness (the extent to which someone identifies with a social group) and the degree of grid (the extent to which someone accepts and respects a formal system of hierarchy and procedural rules). (Figure 2).

Organizations or social groups belonging to the entrepreneurial prototype perceive risk-taking as an opportunity to succeed in a competitive market and to pursue their personal goals. They are characterized by a low degree of hierarchy and a low degree of cohesion. They are less concerned about equity issues and would like the government to refrain from extensive regulation or risk management efforts.

This group contrasts with organizations or groups belonging to the egalitarian prototype, which emphasizes cooperation and equality rather than competition and freedom. Egalitarians are also characterized by low hierarchy, but have developed a strong sense of group cohesiveness, solidarity, and equity. When facing risks, they tend to focus on the long-term effects of human activities and are more likely to abandon an activity (even if they perceive it as beneficial) than to take chances.

The third prototype, the bureaucrats, relies on rules and procedures in order to cope with uncertainty. Bureaucrats are both hierarchical and cohesive in their group relations. They believe in the effectiveness of organizational skills and

practices and regard a (risk) problem as solved when a procedure for its institutional management is in place.

The fourth prototype, the group of atomized or stratified individuals, as a matter of principle believes in hierarchy, but does not identify with the hierarchy it belongs to. These people trust only themselves, are often confused about risk issues and are likely to take high risks for themselves, but oppose any risk that they feel is imposed upon them. At the same time, they see life as a lottery and are often unable to link harm to a concrete cause.

In addition to the four prototypes, there may be a hybrid group called the autonomous individuals or the hermit, who can be grouped in the centre of the group-grid coordinates. Thompson (1980) describes autonomous individuals as self-centred hermits and short-term risk evaluators. They may also be referred to as potential mediators in risk conflicts, since they build multiple alliances to the four other groups and believe in hierarchy only if they can relate the authority to superior performance or knowledge.

Similar to the postmodernists cultural theory is based on the assumption that risks are socially constructed and caused by structural rather than individual forces (right position with tendency towards structuralism). In terms of the three leading questions, cultural theory of risk addresses outcomes as genuine expectations that different (sub)cultures associate with different decision options or events. In contrast to the post-modern theory or the systems theory the range of possible expectations in cultural theory is limited to a small set of cultural prototypes. These prototypes determine both: what is selected as a desirable or undesirable outcome and how uncertain or certain these outcomes are being perceived. The aggregation of likelihood and outcome is also modified by the dominant beliefs within each cultural prototype. In particular, context variables such as perceived equity play a major role in forming an overall judgment about the acceptability of risks.

### **Personal culture and perception of risk**

Jodelet (1989, as cited in Teka and Vogt, 2010) argues that the individual perception of risk is influenced by the personal socio-economic status, the personal experience and the educational level of a person. Moreover, factors such as poverty, unemployment and low educational level may enhance the individual feeling of hopelessness and lead to a trend to overestimate the risks. Many studies which have included people with low social status, with low educational level and who live in poor conditions conclude that people with these characteristics tend to have very high rating levels with regard to perceived risks (Boholm,

1998). Nyland (1994, as cited in Bronfman and Cifuentes, 2003) argued, that a person who fights for survival and who daily subjected to various threats may have a higher degree of risks perception at a more general level.

According to the economic theory, people who are rich may have the willingness to take risks as they have the feeling that it is possible to be benefit more from these risks and that somehow are shielded from the possible adverse consequences. In contrast, poor people have completely the opposite feeling. Moreover another individual factor which influences the perception of risk is personality. According to the personality theory, some individuals may not like risk taking and so they seek to avoid any risky situations while there are people who love taking risks and so they seek to face risky situations (Wildavsky and Dake, 1990).

Based on Waring and Glendon (1998) cultures are risk-oriented regarding behaviors, targets, perception and mitigation. Russia, Middle East and Far East are particularly risk oriented cultures.

First of all, the key principle which characterizes a culture is first of all the economy of the region (Waring and Glendon 1998). Based on human nature, when you struggle to survive you become a risk-seeker because of the fact that high risks provokes high returns and you don't have much to lose. This is called "risk-return tradeoff" and it is *"the principle that potential return rises with an increase in risk. Low levels of uncertainty (low-risk) are associated with low potential returns, whereas high levels of uncertainty (high-risk) are associated with high potential returns"*.<sup>1</sup> Hence, cultures whose nations are struggling economically (African nations, central Asian nations, Latin America) are expected to be more of risk-takers.

Furthermore Waring and Glendon (1998) recognize some other factors that affect cultural risk perception which have to do with pride, assertiveness and avoiding loss of face. For example let's investigate the driving behavior of different regions. Drivers in Middle East, Central Asia, Mediterranean will not give way to other drivers unless an accident is imminent. This is not happening in countries with Western sense and that's why accidents are rarer. For example in 2009, 2,217 people lost their lives<sup>2</sup> in car accidents in USA that in 2009 had total population of

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<sup>1</sup> <http://www.investopedia.com/terms/r/riskreturntradeoff.asp> (accessed the 14th April 2013)

<sup>2</sup> U.S. Census Bureau, Statistical Abstract of the United States: 2012

308.745.538 citizens while in Greece there were 1314 fatal car accident in a population of 10.737.428 citizens.<sup>3</sup>

Moreover Western people tend to be more materialistic than Eastern people. This means that they are more risk-averse when there is a high possibility of losing possessions they acquire early in their lives. On the other hand in cultures that mater a possession is not that widespread they tend to be more entrepreneurial and more risk-seeking (Waring and Glendon 1998).

From the above it is argued that labeling nations as risk-oriented or risk-averse may be misleading because of the fact that these principles are not mirrored in every citizen of these countries. Thus there might be people in Eastern cultures that are not materialistic hence this outcome cannot be regarded as obsolete. However, it reflects the majority and that's why it is an interesting argument. Figure 4.1 shows the role of culture in risk perception.

The most correct way to analyze cultures in risk perception is by observing Rohrmann and Renn's (2000), Weber's (2001) and Waring and Glendon's (1998) approach that divided cultures into five main categories: : hierarchists, fatalists, egalitarians and individualists and collectivists.

- Hierarchists – They perceive risk as being related to hierarchy. They adopt the views of experts regarding risks evaluation and risk acceptability.
- Fatalists – They tend to avoid risk as far as their knowledge permits it and they accept that the level of their control is limited.
- Egalitarians – They believe that globalization, industrialization, economic growth and technological growth can pose great risk for their lifestyle. They protect their “world-view” at the expense of others.
- Individualists – They link the level of risk to the level of opportunity. Their imperative focus is on speculative aspects of risks.
- Collectivists – They endorse social relationships in the risk taking process and in case of failure they turn for support to their social network. .

### ***Cushion Hypothesis***

Cushion hypothesis is an example used by Hsee and Weber (1999) as cited in Weber (2001), in order to exhibit the differences between individualists and

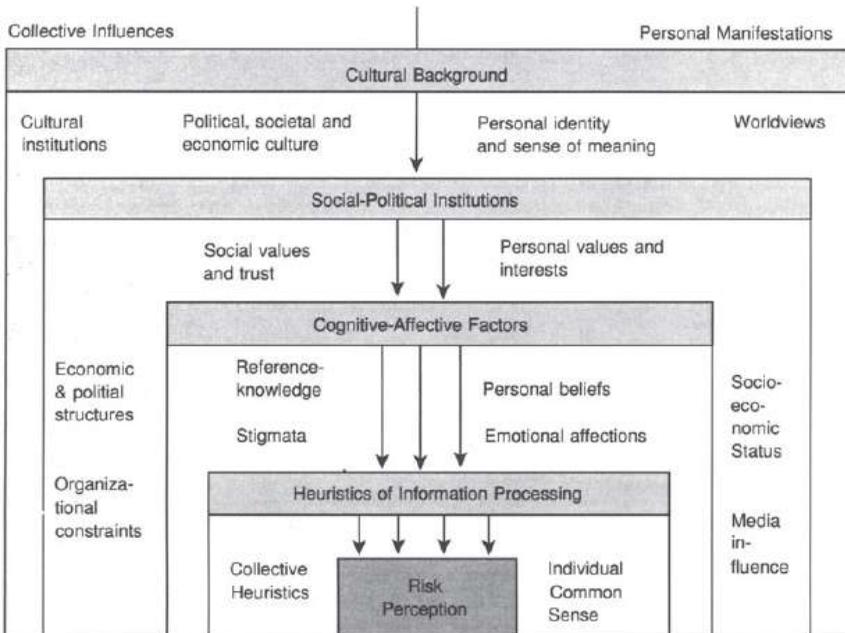
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collectivists. They were observing the strategic alliances between Americans (individualists) and Chinese (collectivists).

Their key finding was that Chinese people were closer to their families and to their relatives. When they were in need they turned to their social network in order to seek for support. By support they didn't mean emotional support but material and financial support. As a consequence objectively same uncertain situations were regarded subjectively by Chinese people as less risky because of the fact that in case they "fell" they had their social network to "hold" them. In such case we can assume that a strategic alliance between companies with individual and collectivist background can increase the relational risk between the partners given the fact that they perceive differently risk. The same can be argued for the rest main categories of culture. In this paper we argue that in order for a strategic alliance to have low relational risk the companies that take part in the alliance have to be from the same cultural category.

**Figure 4.1 – Cultural Risk Perception**



**Source:** Ortwin Renn, Bernd Rohrman, *Cross Cultural Risk Perception: State and Challenges, Risk, Governance and Society, Vol. 13* Springer Science Business Media Dordrecht, p. 221

## **Objective and subjective risk perception**

Risk is perceived as a function of probability and consequence. The chances of any event is based on longitudinal empirical studies of events. So, in the standard formal definition, risk is conceptualized as the product of probability and the magnitude of the loss (Bye, R. & Lamvik ,2007). Some researchers support the idea that there is no significant difference between the *objective* and the *subjective* conceptualization of risk. Other researchers believe that the subjective “function” of risk includes different components than the objective one. Subjective risk is related to the experience of the loss, the significance of the loss and the uncertainty related to it. Additionally, it has been accepted that the subjective experience of *lack of control* can be critical for the subjective evaluation of the risk related to the actual event. This implies that lack of control may have a critical effect compared to the size of the loss and the evaluation of probability (this argument is used to explain why e.g. people are more afraid of being a passenger in a car compared to driving themselves). Other academics emphasize on the possible variation of the result of a potential dangerous event. *Time* is as an important aspect of subjective risk perception. Risk is defined as a function of probability and the *magnitude of loss during a certain time lag*. The time between the possible event and present time influences the subjective estimation of the size of the loss. A lack of correspondence in the way people interpret risks often takes place. Douglas & Wildawsky (cited in Bye, R. & Lamvik 2007) argue that the perception of risk reflects the individuals’ social and natural surroundings. They claim that every form of social life has its own risk portfolio. Individual risk perception reflects different social contexts. Risk perception reflects the organizational and moral order of a specific community. The relationship between the “form of social life” and risk perception is also indicated in a study of identification of risk among people with different nationalities. Even though situated in the same working context, there was a difference between the different nationalities when it came to identifying risk (Bye, R. & Lamvik 2007).

Although researchers disagree about how people perceive risks, however, there is a debate about the *relationship between objective risk and subjective risk perception*. It has also been suggested that there is a *relationship between individuals risk perception and risk behavior*. The relationship between individuals’ risk perception and risk behavior is a critical factor in formal risk analysis, risk modeling and the working out of measures to minimize risk. Due to this, people who feel the most unsafe also experience the most job-stress, it takes place what is said “*feel at risk they also are at risk*” (Bye, R. & Lamvik 2007).

## **Conclusions**

Over the past decades, scientists such as psychologists, geographers, sociologists, anthropologists have achieved to give a deep contextualization of the meaning regarding the risk perception by approaching risk perception from the psychological and cultural point of view (Bickerstaff, 2004). This cultural and psychological science perspective on risk involve a large number of desirable and undesirable effects that people and societies associate with a particular cause, leading to a negative impact for something that people value. Scientists conclude that socio/cultural groups or individuals act not according to the scientific risk assessment but according to their own perception of risk.

Furthermore, from the psychological point of view risk perception process is based on the people's danger experience and how the information about the source of risk is communicated in people's psychological mechanism which is responsible for posing uncertainty to people. Moreover, the psychological and cultural studies on how people and societies really assess risks have been shown that people, anywhere in the world regardless of their cultural background, use particular criteria to form their own opinion about risks. For example the familiarity of the risk, the personal ability to control the level of the risk, the capability of the risk to cause a catastrophic disaster, the certainty of that the risk would have a fatal impact and the high dangers for the future generations are some of the characteristics used by people or societies, as assessment values for perceived risks.

Despite this, the effectiveness of these criteria in the public opinion-forming differs considerably, according to the people's social group and their personal characteristics and dimensions. For example, ingrained cultural values and individual dimensions such as personality, personal lifestyle, personal experience, socio-economic status and educational level have great contribution on the way that people perceive the nature and context of the risk.

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