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## Risk perception study in tourism: Are we really measuring perceived risk?

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### Abstract

Research on tourist's risk perception is emerging since the beginning of last decade, marked by the 9/11 attack. In view of the cleavage and dearth of risk perception theories, scholars begin to question the validity or credibility of risk perception study in tourism. This paper investigates concepts and theories of risk perception adopted by existing literature with an aim to conceptualize the different aspects of risk perception in order to enhance current understanding of tourist's risk perception. Based on existing literature, uncertainty, worry, fear, and anxiety are found to be closely related to risk perception. These terms have been used interchangeably in past studies, which has therefore caused confusion in understanding tourists' experience with risk. The definitions of the aforementioned terms and their relationship with risk perception are clearly illustrated in this paper. Likewise, recommendations for future research agenda are included.

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### 1. Introduction

Since the attack of 9/11 in 2001, along with the increasing number of reports on exogenous risks such as terrorism and natural disaster, there is an exponential increment on the number of risk research in tourism (McCartney, 2008). With that said, it somehow does not mean that risk was not studied at all before the tragedy in 2001. There is a number of studies, especially in the 1990's, which have discussed risk in tourism (Maser & Weiermair, 1998; Roehl & Fesenmaier, 1992; Sönmez & Graefe, 1998a, 1998b). The trend is not beyond expectation as Beck (2006) contends that our society is moving from a society of classes to a society of risks, which

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is a result of modernization and secularization that lead to the declination of trust and social cohesion (Giddens, 1991).

Among these risk studies, a substantial proportion has focused on perceived risk rather than the actual risk. With the increasing number of studies on tourists risk perception, some scholars begin to question the validity or credibility of risk perception research in tourism context. In other words, are scholars really measuring/exploring what they intend to do? The main arguments are based on the cleavage and lack of risk theories in tourism studies which result in fragmented understanding on perceived risk (Korstanje, 2009, 2011a; Ross, 1975; A. M. Williams & Baláž, 2014). For instance, Korstanje (2011a) aptly points out that “risk was a term coined in a quantitative-related paradigm, there is no room for qualitative studies in risk- perception theory” (p. 225). The current study has no aim to bridge the theoretical gap among different schools of thoughts as it involves melting the underlying philosophical division. Alternately, this conceptual study attempts to investigate the concepts and theories of risk perception adopted in past studies, with an aim to debate on the legitimacy of risk perception research in tourism. The discussion outcome is expected to enhance current understanding by synthesizing fundamental arguments of risk perception. Likewise, recommendations to future research in the risk domain are proposed.

## **2. Risk and Tourism**

Risk and tourism are interwoven as the purchase of leisure trip is inherently attached to risk (March & Woodside, 2005). Similarly, tourism is service in nature and thereupon it inherits the intangibility, heterogeneity, perishability, and inseparability characteristics from services (Mitchell & Greatorex, 1993a; A. M. Williams & Baláž, 2013). Past studies have provided both theoretical and empirical evidences to support the argument that service consumers perceive greater risks than goods consumers (Mitchell & Greatorex, 1993b; Murray & Schlacter, 1990). Most of the risk studies in tourism focus on perceived or subjective risk instead of real or objective risk as tourists are only able to experience risk that is related to themselves (Budescu & Wallsten, 1985; Reisinger & Mavondo, 2005) or risk that they are able to perceive (Quintal, Lee, & Soutar, 2010). From a constructionist viewpoint, risk is socially constructed and is interpreted differently across different social structures and cultures (Douglas & Wildavsky, 1982); the experience or perception of risk can be contested, incorporated, and transformed (A. M. Williams & Baláž, 2014). Similarly, post-modernists perceive risk as a blur and inconclusive concept (Hassan, 1985). The importance of perceived risk has been highlighted in the existing literature. Roehl and Fesenmaier (1992) discovered three dimensions of perceived risks: physical-equipment risk, vacation risk, and destination-specific risk. A more recent work done by Pennington-Gray and Schroeder (2013) on international tourists’ safety and security perceptions suggest seven types of perceived risk related to tourists, which include crime, disease, physical, equipment failure, weather, cultural barriers, and political crises.

## **3. Problems with Risk Perception Research in Tourism**

In view of the emerging research trend of risk perception, some scholars begin to question the appropriateness of risk perception investigation in tourism context (Korstanje, 2009, 2011b; Quintal, Lee, & Soutar, 2005; Quintal et al., 2010; Reisinger & Mavondo, 2005; Wolff & Larsen, 2013a). The concept of perceived risk is equivocal as different scholars have attached different meanings to it (Sjöberg, 1980). Reisinger and Mavondo (2005) define perceived risk as cognitive probabilities to be exposed to threats and dangers. Probability and possibility are two distinct but interrelated concepts. The former refers to the measurable chances while the latter takes shape in fantasy (Korstanje, 2011a). For example, the probability of becoming a victim of crime when travelling to rural destination is low but the possibility exists. The problem with Reisinger and Mavondo’s (2005) definition of perceived risk is that, tourists who go for a holiday might not be aware of their own assessment of potential risk, in other words, tourists might not recognize the probabilities of risk, although they might have a general idea on the possibilities of risk. Williams and Baláž (2014) characterize tourism as a blend of uncertainties and fractionally known risks. Risk refers to known uncertainties while uncertainty denotes unknown uncertainties (Knight, 1921; A. M. Williams & Baláž, 2014). For instance, tourists travelling to the East Coast of Sabah, Malaysia might have heard about its notorious reputation for abduction (known uncertainties) while others might not be aware of the safety status in this area (unknown uncertainties). In any case, tourists are unlikely to be informed of the exact probabilities, presented in

quantitative form, of becoming a victim of abduction. There raise a question: Past studies (Fuchs & Reichel, 2006, 2011; Lepp & Gibson, 2003; Reisinger & Mavondo, 2006; Roehl & Fesenmaier, 1992; Wichasin, 2011) which investigated risk perception, were they actually measuring perceived risk, perceived uncertainty or both but in the name of risk perception?

From a socio-psychological point of view, the greatest challenge faced by travel risk perception research is the definition of perceived risk itself (Korstanje, 2009; Quintal et al., 2010). Korstanje (2009) argues that study of risk perception prior to actual holiday is merely an exploration of anxiety as there is a lack of direct stimuli which is the indispensable element to form perceived risk. Based on this argument, risk perception studies which were conducted prior to the trip (Lepp & Gibson, 2003; Simpson & Siguaw, 2008; Teng, 2005) are not measuring perceived risk, although the authors claim so.

Korstanje's (2009) argument is based on the existence of threat stimuli and the temporal effect at the time risk perception is investigated. From a post-modernistic perspective, the existence of threat stimuli is insignificant as the experience or perception of risk continues even when the component of threat has been withdrawn. It is the aftermath experience that significantly shapes, transforms, and influences how tourists perceive risk (2014). Lyng's (2008) research on edgeworkers provide empirical support to how risk contributes to self-esteem and other cultural capital through narratives and dialogues. For instance, bungee jumpers experience and re-experience risk through telling their stories to others. Risk perception is therefore, constructed and reconstructed through narratives. This standpoint is built upon the idea that risk is a fluid concept which can be enacted and played by the actor, which is tourist in this case. The categorization and measurement of perceived risk are not the centralities, so as the distinction between cognitive perception of risk, uncertainty and the emotion (anxiety, fear, excitement) attached. Conversely, it is the in-depth meaning that matters: how risk perception is constructed and how it influences the actor's live and others in terms of risk taking.

#### 4. Alternative Terms to Risk Perception

The definition of perceived risk is problematic. The differences among the terms perceived risk, uncertainty, worry, fear, and anxiety are ambiguous and have been used interchangeably which lead to definitional and operational inconsistency (Quintal et al., 2010). Particularly, there is a disjoint definition between risk and uncertainty (Ellsberg, 1961; Hofstede, 2001). Scholars distinguishes perceived risk and perceived uncertainty based on probability (Hofstede, 2001; Sjöberg, 1998). According to this definition, perceived risk is used when the probability is known, otherwise, perceived uncertainty is more appropriate. Quintal, Lee, and Soutar (2005) manifest the distinction between perceived risk (PR) and perceived uncertainty (PU) by presenting the different impacts that these two constructs have on travel decision making process. Nevertheless, their study did not examine the relationship between PR and PU. The authors, therefore, urge for a further investigation on differentiating and incorporating perceived risk and perceived uncertainty. Likewise, scholars have also pointed out the debatable relationship between perceived risk and worry (Larsen, Brun, & Øgaard, 2009; Sjöberg, 1998; Wolff & Larsen, 2013a); fear and anxiety (Jackson, 2006); fear, anxiety, and risk perception (Korstanje, 2009); perceived risk and anxiety (Reisinger & Mavondo, 2005).

Figure 1 summarizes the relationship among the aforementioned terms. As illustrated, there are two streams of relationship chains generated by perceived risk and fear which are induced by direct stimulus: perceived risk is triggered by an event with known probability while fear is triggered by an object (Hofstede, 2001). The second layer are diffuse feelings, including uncertainty and anxiety. Uncertainty is related to perceived risk but with unknown probability (Quintal et al., 2005). Similarly, anxiety is connected to fear but without direct stimulation from specific object, which means it is built upon the subject's own fantasy and imagination (Korstanje, 2009). In fact, tourism research on fantasy has gained increasing awareness in recent years, especially in this post-modernism era (Light, 2009; A. Williams, 2006). Tourism space, a liminal zone which frees tourists from everyday structure, is also a place for tourists to look for fantasy, imaginary, reflection, and escapism (Light, 2009; Squire, 1994; A. M. Williams & Baláž, 2014).

The third layer is worry which is the cognitive response to anxiety and uncertainty (Larsen et al., 2009). Worry, a concept which has been widely studied in psychology domain, receives relatively less attention in tourism (Larsen et

al., 2009; Wolff & Larsen, 2013b). According to Larsen et al. (2009), worry is a chain of thoughts or cognitive responses, which carries negative affection over the uncertain future or outcome. As worry involves cognitive activity, it brings out positive effects because people are conscious about the possible negative outcome and therefore, are likely to trigger adaptive mechanism to manage risk and fear (Freeston, Rhéaume, Letarte, Dugas, & Ladouceur, 1994; Peters, Slovic, Hibbard, & Tusler, 2006). Worry was found be only moderately related to perceived risk as tourists may perceive a destination to be risky but not necessary worry about going there and vice versa (Larsen et al., 2009).

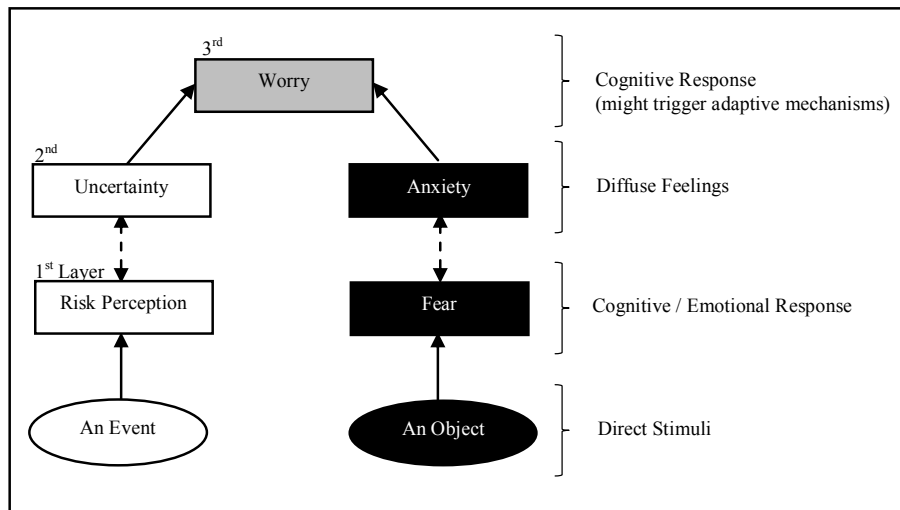


Fig. 1. The Relationship Chains of Concepts Related to Risk Perception

## 5. Discussion, Implications and Conclusion

The idea of this conceptual paper is built upon arguments of risk perception as a valid and convincing tool to investigate tourists' concerns prior to and/or when they are taking up a trip. Thus far, the paper has outlined different aspects of risk perception in tourism context. Based on the studies outlined in above discussion, it appears that existing tourism studies tend to work on disconnecting rather incorporating the different cognitive and affective concepts related to risk perception. Conversely, psychology researchers are convinced that emotion and cognition are inseparable. Loewenstein, Weber, Hsee, and Welch (2001) propose an alternative theoretical perspective, namely the risk-as-feeling hypothesis. Loewenstein et al. (2001) found that when it comes to the moment of making decision under a risky or uncertain situation, human's cognition and emotion act in a divergent way and in many cases, emotional reaction overrides cognitive evaluation. Therefore, risk perception is more than a perceived calculation of negative probabilities. Slovic and Peters (2006) conclude that risk is perceived and acted on in two fundamental ways: risk as feelings and risk as analysis. In this regard, a more holistic approach is needed to cover all the three layers of concepts related to risk perception.

Considerable work has been focused on the objective side of risk perception, such as those studies which measure and categorize tourist's risk perception (Pennington-Gray & Schroeder, 2013; Roehl & Fesenmaier, 1992). The categorization and labelling of perceived risk, let alone the validity or credibility issue, has contributed significantly to our understanding of risk perception. However, research solely focus on risk perception fail to recognize risk as a sophisticated social phenomenon. In fact, tourism itself is a complex social occurrence. Perhaps, it is about the right time to look at the subjective side of risk perception -- risk perception is socially constructed and mutually shaped by the subject (tourist) and others (Douglas & Wildavsky, 1982) and the construction of risk perception endures even after the removal of threats (A. M. Williams & Baláz, 2014). A qualitative or post-modernistic approach could have much to contribute, especially in bringing into horizon the factors that construct and reconstruct risk perception.

In sum, there are two major considerations to caution prospect researchers when conducting a risk perception research. First, researchers should reflect upon his/her own belief as the definitions of risk perception varies across different philosophy underpinnings. For instance, perceived risk can be comprehended as a knowable probability of negative outcomes, at the same time a fluid concept defined by subjective meanings and blurred boundaries as the construction of risk perception continues even when the stimuli of threat has been removed. The former interpretation are mainly adopted by positivists while the later are well accepted by constructivists. Subsequently, scholars should consider clearly defining the schema of risk perception in each research project. Risk perception can be as specific as perceived probabilities, it can also be expanded to a blanket term that covers the all three layers illustrated in Figure 1. The researchers and the audience need to know exactly what is measured or explored, rather than just an approximate idea. This is fairly important, considering most of the respondents are lay-people who have limited understanding on the debatable definitions of risk perception. So, how would researchers know whether the respondents are referring to risk per se or feelings such as thrill, fear or worry when they filling up the survey or answering the interview question. Likewise, if scholars are adopting different risk perception schema, how can the findings be generalized, transferred, compared or utilized? Arguably, it is worth looking forward to a more holistic definition of risk perception to solve this application difficulty and to reconcile the disjointed pools of studies.

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