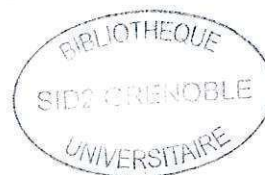


# International Handbook of Professional Identities

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## Identity, Risk, and Accidents

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**Abstract** This chapter shows how different identities are constructed within organizations and how these identities affect exposure to risks and reactions to accidents. We look in particular at how an individual's relationship to risk can be experienced as a source of identity valorization and construction, at the same time as it can result in accidents that threaten that same identity. We show how identities - or rather, identity defenses - influence both perceived risk and naive or spontaneous causal explanations of accidents. We conclude by pointing out the merits of taking this manifestation of culture- and identity-related beliefs into account in risk and accident analysis and prevention.

**Keywords** Identity, Naive Explanations of Accidents, Risk Perception

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### 1. Identity, Culture, and Risk

This section looks at the notion of identity and its relationship to risk.

#### 1.1. Identity: A Multi-Faceted Concept

The notion of identity is a key to grasping not only individual behaviors and behaviors within organizations but also attitudes toward risks. Identity is what allows us both to differentiate ourselves from others and to see how we resemble others. It constitutes our self-awareness, as well as the recognition by others of what we are. It allows an individual to perceive what is unique and

specific to him/herself, that is, his/her individuality. It results from socialization, through which social representations are internalized [1].

One can make the distinction between several different kinds of identity: personal, social, occupational, organizational, national, etc. *Personal identity* is based on self-awareness, on one's self-representation or cognitive understanding of oneself. *Social identity* is what describes individuals from the outside; it refers to the various characteristics people share with other members of the groups to which they belong (gender, age, occupation, training, education, qualifications, etc.). *Occupational identity* draws from attitudes rooted in people's subjective representations of where they stand in society, their feelings of belonging, inclusion, or exclusion; it helps us understand the pathways and positions of actors within an organization. *Organizational identity* refers to the view that members have of their own organization; it can refer to the culture or values shared by those members.

Individual and collective identities are not necessarily independent and can be based on each other. The construction of an individual identity goes through a series of identification processes by which the values, norms, and behaviors of a person's groups of membership are gradually internalized. Accordingly, individual identity is based on personal identity (individual attributes like gender), social identity (membership in a social category such as the family or a social group), and relational identity (the role played within a group, one's functions). In all cases, identity, or rather identities, are built through a process of socialization and organizational learning that is closely tied to the culture of the concerned group or organization.

## 1.2. Culture and Identity in Organizations

Factors related to culture and identity in organizations are becoming increasingly important in organizational procedures and processes, for reasons including growth and development, merging, globalization, relocation, and so on. An organization's culture thus acts as *the binding force of the organization or group*. It is what gives the organization its *personality and identity*. It allows its members to identify with each other, and conveys many anchor points that fashion and guide their behaviors and the major decisions made by



management. "The culture refers to a system of beliefs, norms, values, representations, and experiences shared by the members of a given social group. There are several kinds of culture: organizational, national or ethnic, occupational, and class" [2: 299].

Through the experience of the power relations that one wields or, on the contrary that one undergoes, in accordance with one's strategic capabilities, an individual not only acquires norms, values, and representations, but also social recognition (or a lack of it) that will modify his/her self-images. No matter what position or status a person occupies in an organization, cultural learning in the organization has an important psychological implication: access to identity. Cultural learning provides access to identity via a "joint process of identification and differentiation" [3: 332]. Identities both influence and define a person's relationship to risk. Indeed, beliefs, values, norms, experiences, and so on, can lead to erroneous judgments of risk and can therefore have various repercussions on accidents.

### **1.3. Identity and Risk**

Identity may act as a source of valorization, but it can also generate anxiety whenever it is threatened. In an analysis of children's talk about accidents, Green [4] showed how children use accidents "to construct gendered identities and to delineate the boundaries of peer groups" [4: 457]. Rather curiously, this author noted that the vast majority of the children claimed responsibility for accidents and risk prevention rather than attributing accidents to factors such as bad luck, fate, malevolent others, or careless parents. According to Green [4], this way of explaining accidents stresses "the importance of risk as a strategy for constructing social identity" [4: 464], as a way of showing they are mature, competent, and independent social actors. Clear gender differences showed up between the girls and the boys. The girls felt responsible not only for the accidents that happened to them and the management of everyday risks, but also for the safety of others. The boys talked about accidents in terms of bravery, risk-taking, and physical abilities. It seems, then, that accidents can act as a vehicle for exploring a local consensus about responsibility, culpability, and social identity. Green [4] concluded, "Prescribed identities based on gender

roles, position in the occupational hierarchy or access to the means of production have, it has been argued, been replaced with an individualized notion of identity, in which *'The individual himself or herself becomes the reproduction unit of the social in the lifeworld'* [4: 476-477].

The actors in an organization are exposed not only to identity gains, but also to identity risks related to various phenomena (accidents, layoffs, changes within the organization, etc.). According to Petriglieri [5] for example, "The final possible source of threat is the material world, such as a disabling car accident that cuts short a promising career" (Maitlis, 2009, quoted by Petriglieri [5: 641]). Identity threat is defined by Petriglieri [5: 641] as "an experience appraised as indicating potential harm to the value, meanings, or enactment of an identity". This threat can lower one's self-esteem, generate conflict between work groups, resistance, turnover, and absenteeism, but especially a will to reestablish one's integrity or an attempt to minimize the threat. As mentioned by Petriglieri [5] individuals need to "maintain a sense of continuity over time and yet adapt to shifting personal and social conditions, individuals need to balance their need to preserve identity stability with their need to sustain identity dynamism" [5: 642]. Moreover, one should also jointly consider the interaction between threats to organizational identity, and threats to individual identity, in addition to individual and organizational responses to those threats. "Because organizational members define themselves, at least partially, in terms of their organizational identity, events that threaten an organization's identity might also threaten identities of individual members" [5: 657].

However, access to identity enables individuals to fight against this threat by means of reliance on the culture's role system and its mechanisms (conventions, customs, taboos, norms, etc.), which govern relations among members of the organization. These cultural mechanisms create a safe and protective framework capable of explaining different sensitivities and rationalities in the face of risk and accidents, at both the individual and collective levels. Identity can constitute a major influence in our understanding of and behaviour towards accidents and safety, because people are strongly inclined to identify with several groups within their workplace or their environment. "Individuals perceive and interpret risk in the context of their place in a society whose



particular social forms influence what they come to perceive as risks. The implication of this approach is that challenges to risk perception represent not an appeal to individuals to adopt an alternative cognitive perspective, but a threat to existing forms of social order and, by implication, the shared values and beliefs which underpin those" [6: 399-400]. We postulate that risky situations and accidents are defined, understood, and reacted to differently by people, depending on their gender, race, age, culture, education, personality, social status, training, and experience. Addressing the issue of how these different identities (professional, individual, social, and organizational) relate to risk and safety explanations and perceptions is the main objective of the present chapter.

## 2. Identities and Accident Explanations

Kouabenan ([7], [8], [9], [10]) developed an original approach based on the idea that to effectively reduce accidents, it might be beneficial to take into account the spontaneous explanations of accidents given by ordinary individuals (i.e., person who are not specialists in matters of safety). This author contends that the search for an explanation is a human necessity, especially in the face of a negative, unusual, or dramatic event like an accident. Unfortunately, he points out, the spontaneous explanations given not only by ordinary people but by experts as well are often biased. Yet they influence behavior nonetheless. This being the case, knowledge of such biases and their underlying mechanisms offers an important avenue for exploring accident prevention. Among the factors likely to introduce a bias in spontaneous explanations, which this author calls "naive explanations", are factors linked to personal or social identity (personality, gender, age, occupation, education, etc.), occupational or organizational identity (status, hierarchical position, groups of membership, size of the organization), and cultural identity (national or ethnic culture, etc.). For the sake of economy of the presentation here, we will limit ourselves to a few factors, for illustration.

## 2.1. Impact of Individual and Social Identities on Accident Explanations

This section will illustrate the impact of individual and social identities on accident explanations using examples drawn from studies based on personal attributes (social identity: gender and age).

### 2.1.1. Gender and Accident Explanations

Research on the role of gender in explanations of behaviors and accidents has sometimes given rise to contradictory results. Some investigators have concluded that gender has an impact on causal explanations, while others have not found this effect. It seems that studies showing no gender effect on causal explanations [11] have not taken the relevance of the situation for the subjects into account, insofar as gender identity only take into account the perceived personal similarity with the stimulus person. Shaw and McMartin [11] claimed that gender affects explanations only if personal relevance<sup>1</sup> and situational relevance<sup>2</sup> differ for the two genders. Accordingly, in a study that took into account the relevance of the task for the participants, Whitehead and Hall [12] found that women attributed more causal responsibility than did men to an actor who was involved in an accident while executing a female-typed task, whereas men and women attributed equal responsibility to an actor engaged in a male-typed task. In another experiment, these authors obtained a stronger gender effect indicating defensive attributions that were grounded in situational and personal relevance between the actor and the person explaining the accident. More specifically, the women judged the behavior of the actor involved in an accident while performing a female-typed task to be more reliable than the men did, whereas the men judged the behavior of an actor performing a male-typed task to be more reliable than the women did.

Walster [13] set forth the idea that defensive attributions vary across gender. She noted that women, unlike men, attributed more responsibility to the

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<sup>1</sup> Personal relevance is the perceived similarity between the stimulus person described in the accident and the person who is explaining the accident (gender, appearance, beliefs, values, etc.).

<sup>2</sup> Situational relevance refers to the probability that the accident could befall the analyst as well.



stimulus person (a man) when the consequences of the accident were serious. In the same vein, Breslin et al. [14] found that "whereas the females emphasized how their complaints were actively disregarded by their superiors, males (and some females in male-dominated work settings) described how they stifled their complaints in order to appear mature among their (...) co-workers" [14: 782]. Likewise, LaDoux, Fish, and Mosatche (1989, cited by Kouabenan [8]) showed that although men, as compared to women, felt that an accident whose victim was a male peer was due to fate, they also felt (more than did the women) that the victim could have avoided being injured and that he deserved what he got. It would seem that accidents offer the opportunity to assert one's positive social identity and maturity (for more examples, see [8]). However, a more nuanced result was obtained by Kouabenan, Gilibert, Medina, and Bouzon [15]. They showed that when the accident was serious, male managers made more attributions internal to subordinate victims than female managers did. Further research is thus needed to obtain a more accurate understanding of how gender affects naive explanations of accidents.

### 2.1.2. Age and Accident Explanations

Studies on the role of age in naive explanations have obtained the same defensive-attribution bias as observed in earlier studies based on other variables like gender. Namely, persons in a given age group think that accidents are mainly caused by persons in the other age group, and that their own group is better equipped to cope with accident-prone situations. This means that they self-attribute a stronger feeling of control. In matters of naive explanations, it seems that children and adults reason differently: the former's explanations are sometimes — but not always — seen by the latter as not very credible.

Indeed, attributions of responsibility appear to get stronger as the stimulus person gets older [16]. Shaver [16] noted, however, that although individuals attribute more responsibility to the presumed author of the accident when he/she is old, they prove to be more indulgent when the author is equal in age or younger than themselves. For this author, such an explanation is less a reflection of a self-protection bias than of a cultural norm based on a legal and moral tradition consisting of considering that older persons must exhibit greater



responsibility. In the same vein, Aldrich and Mancuso (1976, quoted by Kouabenan [8]) found that the youngest children make more severe judgments towards the author of an accident and assess their reactions to their mother's reproaches in terms of conformity to adult orders, whereas the oldest children assess these reactions based on a principle of mutual respect. It would seem here that the youngest children grant more weight to the visible consequences of an accident than to the author's intentions, a tendency that reverses itself as the child grows older.

It appears, moreover, that children involved in accidents with adults are legally and socially disadvantaged, to the extent that they are attributed more responsibility and little credibility. Sheehy and Chapman (1986, cited by Kouabenan [8]) asked adults to assess adult and child pedestrians involved in accidents. They found that the child pedestrians who were accident victims were judged more negatively than were the adults victims: the children were deemed less competent, less careful, unsure of themselves, less attentive, etc. Likewise, those same adults rated child pedestrians witnesses of accidents more negatively than adult pedestrians witnesses of accidents: less convincing, less persuasive, less competent, less credible, etc.

Lastly, Gyekye [17] conducted studies in an organizational setting and showed that older subordinates were more inclined to explain accidents using external causes than their younger coworkers were. Similarly, older superiors tended to explain accidents in terms of external and/or unpredictable causes, whereas their young coworkers were much more likely to explain them in terms of organizational causes [18].

## **2.2. Impact of Group and Cultural Identities on Accident Explanations**

Here, we look at two kinds of variations affecting accident explanations: the position of the actor and his/her culture or group of membership.

### **2.2.1. Defensive Explanations of Accidents According to the Actor's Position or Status**

Several studies have shown that causal explanations of accidents are a

function of group identities, defined by the individual's role and status in the organization (e.g. [8], [9], [10], [15], [19], [20], [21]). For example, we find that persons who occupy a high position in an organization's hierarchy do not explain accidents in the same way as persons at the bottom of the ladder. The former tend to attribute accidents mainly to factors that bring the causal responsibility of their subordinates to bear (not paying attention, failure to follow safety rules, lack of experience, etc.), whereas the latter tend to attribute accidents mainly to factors linked either to the organization (time pressure, lack of materials, faulty equipment or materials, no protective gear, etc.), to their supervisors (lack of training and awareness of safety problems, priority placed on profitability, etc.), or to bad luck [8]. In two studies conducted in different sectors of activity (skiing, nuclear power), Kouabenan et al. [15] clearly confirmed the defensive tendency of the members of a given group to incriminate the members of the other group (strong internal attributions) and to remove all causal blame from the members of their own group by giving mostly external explanations. More specifically, when managers explained an accident affecting a subordinate victim (outgroup), they invoked more factors internal to the victim, whereas the subordinates made more attributions external to the victim when he/she belonged to their own group (ingroup). Likewise, subordinates explaining an accident that happened to a manager (outgroup) made significantly more manager-internal than manager-external attributions. This is the same defensive-attribution tendency described by Shaver [16] i.e., the tendency of both subordinates and managers to protect themselves or to defend the image of their own group.

In the same area of work accidents with a presumed chain of causes, Dejoy [22] showed that regardless of the links between the causes, hierarchical superiors always attributed a greater role to causes that were internal to subordinates, even when the causal data was unclear. This led Brickman, Ryan and Wortman [23] to contend that when persons are analyzing an accident, regardless of their position in the organization, they tend to move up the causal chain until they find causes internal to the other hierarchical level. Similarly, accident victims and accident witnesses are known to explain accidents differently: victims mainly point to external factors beyond their control,



whereas witnesses mainly bring to bear the causal role of the victim [7]. Explanation differences are also known to be dependent upon the explainer's degree of implication or responsibility in the organization, his/her belonging to a union or the administrative staff of the organization, and his/her occupational or social status in risky situations [see [8], [9]]. As a general rule, accident explanations are often defensive, in the sense that they concern external factors ascribable to the actions of others or to bad luck, particularly when the explainer is involved in the accident in one way or another. By contrast, explanations are internal or specific to the victim or the protagonists of the accident when the explainer is not directly concerned or has no affective attachment to the protagonists ([8], [15]).

#### 2.2.2. Culture, Group Membership, and Accident Explanations

Accident explanations also vary across cultures and ethnic identities ([24], [25]). It seems indeed that the tendency to produce mostly dispositional explanations, to the detriment of situational ones, is more widespread in individualistic cultures than in collectivist cultures, especially for explanations of social events [25] and for adults who rely on clear-cut group norms and roles. However, despite the utility of culture as a factor in naive explanations, few studies have examined the link between the system of values and beliefs of non-expert subjects, and their accident explanations. We can nevertheless mention a few examples. Wang and McKilip [26] had Chinese students, American students, and American citizens living in small cities explain an automobile accident in which the driver was either an American who hit a Chinese man or a Chinese man who hit an American man. The participants' attributions of responsibility were found to depend upon ethnic identity for the Chinese students and the Americans living in small cities, but not for the American students. The strong tendency to give situational explanations in collectivist cultures can be explained by the desire to protect the cultural group to which one feels connected (Bierbrauer, 1992 quoted by Kouabenan [24]), by an implicit theory whereby behaviors are assessed on the basis of mental representations grounded primarily on contextual information ([25], [27]), or in

terms of the fuzzy limit between the individual and the situation [26]. But also, the tendency to furnish external explanations can be explained by the will to preserve social harmony, which is a stability factor of groups. Indeed, when individuals are stigmatized and devalued, their close ones and people in the group to which they belong are also devalued in the eyes of society [27].

### **3. Identities and Risk Perception**

Now let us examine the impact of identities on risk perception, first in relation to individual and social identities, and then in relation to occupational and collective identities.

#### **3.1. Impact of Individual and Social Identities on Risk Perception**

As above for naive explanations, we will limit ourselves here to variations in perception induced by gender and age.

##### **3.1.1. Gender and Risk Perception**

As in Greens study mentioned earlier [4] gender identity brings out risk-perception differences between men and women. As a whole, research has shown that women tend to perceive risks as greater than do men ([29], [30], [31]). Accordingly, Hogarth, Portell and Cuxart [29] found that women perceived more risks than men. However, for both genders, the fact of being in a good mood decreased the perceived level of risk. Sivak, Soler, Tränkle, and Spagnhol (1989, cited by Kouabenan [24]) showed that men asked to assess traffic scenes perceived them as less risky than did women. In their study, Rundmo and Iversen [32] found that women perceived a higher probability of being exposed to an accident than did men. Gender thus determined perceived risk, both alone and in interaction. In this line, Johnson [33] reported that "both women and minorities rated health risk from hazardous-chemical waste sites and from global warming higher than others", and that this relationship was stronger for women (Bord & O'Connor, 1997, cited by Johnson [33: 726]).



Likewise, Flynn, Slovic, and Mertz [31] found that "gender and race significantly predicted overall hazard judgments when other variables, e.g. education, income, age, children and beliefs variables, were controlled statistically" [31: 107] were controlled. Notably, the women and the nonwhite males estimated risks to be higher than the white males did. For the authors, this may be due to the fact that "women and nonwhite males see the world as more dangerous because in many ways they are vulnerable, because they benefit less from many of its technologies and institutions, and because they have less power and control" [31: 107].

In the area of road safety, the greater involvement of men in road accidents has been explained by some authors (Simon & Corbett, 1996, quoted by Kouabenan [8]) as being partly due to the fact that men commit more driving violations than women do. Indeed, Storie (1977, cited by Yagil [34]), noted that "whereas men were involved more often than women in accidents caused by speeding and driving under the influence of alcohol, women were more frequently in accidents caused by judgment errors" [34: 124]. In addition, a study by Cestac, Paran, and Delhomme [35] confirmed that "men had a slightly higher intention to speed than did women" [35: 424] and that the intention to speed was linked to sensation-seeking among the men, but little or not at all among the women.

But this over-involvement of men to accidents can also be accounted for in terms of their optimistic, even exaggerated, perception of their skills and abilities in the face of risk, and also by sensation-seeking. In a study with young people, Assailly (2006) found that girls were more pessimistic than boys, (see [2: 193]). In the same manner, Dejoy [36] showed that men felt they were unlikely to be involved in a road accident and were more confident of their driving skill than women. Quite logically, the self-conformity bias has been found to be greater among men than among women in various studies [37]. However, according to McKenna, Stanier and Lewis [37], when experience is controlled, the gender difference drops considerably.

### 3.1.2. Age and Risk Perception

Many studies have shown that risk perception varies with age and seems to

reflect the search for an identity, particularly among young adolescents for whom perceived risk is often regarded as being linked to the ability to face danger. For Igra and Irwin Jr. [38] citing Jessor (1991), adolescent risk-taking may correspond to the assertion of independence and the quest for identity. "Behaviors such as smoking, drinking, illicit substance use, risky driving, or early sexual activity should be considered purposeful, meaningful, goal oriented and functional rather than arbitrary and perverse" [38: 37]. Identity can thus be instrumental in "gaining peer acceptance and respect; in establishing autonomy from parents; in repudiating the norms and values of conventional authority; (...) in conforming for self and significant others' certain attributes of identity" [38: 41]. One of the key variables in accounting for the over-involvement of young drivers in accidents seems to be their tendency to take risks while driving [39]. This greater risk-taking can be explained in terms of the driver's perception of the risk and its utility or acceptability. Accordingly, young drivers often think they are less likely than older drivers — and even than their peers — to be involved in accidents [40]. Compared to older drivers, they also think that speed is not as a great cause of car accidents, and are less favorable to speed limits. This seems to be more than a mere case of differing perceptions of risk between the young and the old — young drivers overestimate their ability to avoid accidents ([39], [40]).

The greater involvement of children and youth in accidents has also been explained either in terms of their poor perception of traffic situations (Ampofo-Boateng & Thomson, 1991, cited by Kouabenan [8]) or in terms of their tendency to overestimate their physical abilities (Plumert, 1995 cited by Kouabenan [8]). This was confirmed by Nordfjaern and Rundmo [41], citing Gregersen (1996) who noted that "the overestimation of driving skills and underestimation of traffic accident risk among adolescents contributes to their higher frequency of accident involvement" [41: 93]. Moreover, youth are more inclined to accept risk, especially because it promotes the expression of emotions such as aggressiveness, the search for approval by others, pleasurable sensations, the arousal of feelings of power and control, and enhanced self-esteem, see [8]. In the same line, Cestac et al. [35] noted that sensation-seeking was greater among young adolescents who did not consider



certain situations to be risky due to overconfidence in their own driving skills. In the Breslin et al. [14] study, young workers felt that occupational risks were "part of the job". According to these authors, such a view is linked to the workers' perceived lack of control over their working conditions, which they cannot change or improve.

The risk-perception bias is also found in adults. A study with adults by Glik, Kronenfeld, and Jackson (1991 cited by Kouabenan [8]) showed that adults make judgment errors when assessing risks. For example, the parents of children who had been victims of accidents had a better perception of risk than the others. Yagil [34] showed that "perceived gains involved in the commission of (traffic) violations were more strongly pronounced among older drivers than among young drivers" [34: 123]. Lastly, in a study on protective gear for the ears, Arezes and Miguel [42] noted that the older the participants, the less vulnerable they felt. This finding may result from confounding of the age and experience variables. Indeed, several studies ([9], [41]) have shown that experienced persons tend to underestimate risks and adopt unsafe behaviors. Clearly, age can take effect in interaction with several other variables.

### **3.2. Impact of Occupational and Collective Identities on Risk Perception**

In this section, we examine the impact of occupational and collective identities on risk perception. We illustrate with examples of studies on occupational identity and cultural identity in the broad sense of the term.

#### **3.2.1. Occupational Identity and Risk Perception**

Occupational identities are such that risk can be perceived either as a source of valorization and the affirmation of one's trade or professional identity, or on the contrary, as something that is to be denied. According to Cadet (cited by Kouabenan et al. [2]), the fact of belonging to a group, itself a subset of a population, causes certain highly-specific risks to be underestimated and others to be over-valued. For this author, "These modifications reflect more than just group positions about the evaluation; they also serve to preserve identity, cohesion, and in the end, to maintain the group as a reference entity in the face

of fear or danger. (...) Sharing an evaluation with a group amounts, empirically, to validating it, to reducing one's own uncertainty, and thus to finding the 'security' that collective references offer" (see [2: 47]). An example of this is found in the Bellrose and Pilisuk [44] study on the perception and acceptance of occupational risks by three representative groups of employees more or less exposed to risks (radiation protection specialists, fire fighters, and insurance agents). The study showed that, despite the employees' knowledge of the risks inherent in their work, and despite their perception of those risks, their risk-tolerance level was affected by various compensation mechanisms, including occupational identity and the satisfaction it affords, a valorizing public image, the heroic and prestigious nature of the occupation, etc. This reminds us of the image-boosting of American fire fighters, who were praised for their bravery following the 9/11 attacks.

In the same vein, acts of courage and defiance of risk are encountered frequently in certain occupations and sectors, including the chemical industry, the construction industry, public works, and metallurgy, where the risks are not only great but are particularly serious. In the building industry, we often hear of workers who say that risks are part of the job. The same holds true in the chemical industry, where workers are highly exposed to occupational hazards but readily deny the dangerousness of their work (Duclos, 1987, cited by Kouabenan [24: 336]). A similar attitude is found in some extreme sports, whose practitioners almost seem to put on a pedestal the gains they draw in terms of enjoyment, prestige, and image enhancement, and to lower the threshold of risk perception or raise its acceptance. In speaking of hospital personnel, the Lancaster Patient Research Unit [45] noted that "standardization and the use of protocols in the name of promoting safety appeared to bolster managerial identities and seemed to be a key component of professional identity in nursing" [45: 1]. Arfanis, Shillito, and Smith [46] confirmed this in stating that "risk is seen as something subjective, or rather as part of the 'lived experiences' of healthcare professionals" [46: 66].

### 3.2.2. Cultural Identity and Risk Perception

As for occupational identities, studies have pointed out that risk perceptions



vary at a broader cultural scale, that of the society in general. Bontempo, Bottom, and Weber (1997, quoted by Kouabenan [24]), studied financial risks and found that intercultural ethnic or national differences were greater than occupation-related ones. Several studies have shown that risk is the outcome of a social construction and a political negotiation process [24]. By way of interactions and shared experiences, individuals who are members of the same group or community end up elaborating a common culture of risk based on norms and beliefs shared by group members. "Some of these beliefs tend to make risks seem commonplace, whereas others, on the contrary, tend to exaggerate them. Some lead to the idea that risks are inevitable while others tend to make it seem as if certain more-or-less-ritual practices can ward off ill fortune and help one cope with dangerous situations" [24: 331]. As in occupational hazards, certain populations subjected to catastrophes on a regular basis, whether natural or otherwise, tend to incorporate disaster into their lifestyle and view of the world. This is true of countries that regularly experience earthquakes (Turkey, Greece, etc.) or floods, which seem to develop a culture of risk management generally based on solidarity and mutual assistance, one that "considers natural disasters to be an integral part of life" [24: 331].

No matter what cultural memberships are at stake, risk perceptions vary with cultural or ethnic identity. Accordingly, Weber, Hsee, and Solowska [47] who tackled the issue of whether risk-perception differences between people of different nationalities results from long-established norms and values (cultural determinants) or from current and evolving circumstantial factors (socioeconomic or situational determinants), noted that Chinese and German proverbs appeared to provide more incentive for risk-taking than American proverbs did. Comparing risk-taking among Americans, Spanish, and Germans during street crossing, Sivak, Soler, and Tränkle (1989a, cited by Kouabenan [24]) found the Germans to be more careful than the Americans and Spanish. Curiously, in another study (Sivak et al., 1989b cited by Kouabenan [24]), the same authors noted that, as a whole, the American subjects judged themselves to be more careful and to have more foresight than did the Germans and the Spanish, who rated themselves less positively. Other studies (e.g. [30], [33],

[48]) have shown that persons with middle- or lower-class backgrounds or from developing countries perceive more risk than do people in other categories. For example, in a study on road safety in two cultural contexts marked by different levels of risk exposure (Ghana vs. Norway), Lund and Rundmo [48] showed that Ghanaians perceived the probability of being involved in an accident and the severity of the consequences of accidents as higher than the Norwegians did. Furthermore, as a result of their greater exposure, the Ghanaians were more sensitive than the Norwegians to various other risks, including natural catastrophes, war, disease, etc., which they also perceived as more probable than the Norwegians did. Similarly, Finucane et al. and Johnson ([30], [33]) showed that Blacks rated risks higher than Whites, and considered this to be potentially due to a greater feeling of control among Whites. In their study, Mearns and Yule [49] showed that the values conveyed by globalization via uniform managerial practices in different national contexts had more impact than local cultural values in predicting safety-related attitudes and behaviors.

#### **4. Conclusions: Implications for Prevention**

This chapter showed that identity and risk are clearly linked. Depending on various identities (individual, collective, occupational, etc.), risk appears to be a factor in the building and asserting of one's identity and image, a factor for explaining social situations and behaviors in the face of risk, or still again, a factor that steers people's beliefs and reasoning about risks and accidents. These beliefs and ways of reasoning can account for different levels of exposure to and involvement in risk and accidents, and also for the strategies devised to manage and cope with risks. They are at play in the processes underlying explanations and perceptions of risks and accidents. For instance, the higher accident rate observed among young people is often accounted for in terms of their substantial underestimation of danger and their greater inclination for sensation-seeking. In some occupations, risk enters into the image of the occupation, and is thus regarded as an integral part of the job (civil protection, construction, work in a hospital, etc.). Risk is sometimes sought for



prestige and for the sensations it procures (youth, acrobatic athletes, etc.). Some studies have shown that perceived risk is lower among persons from less privileged socioeconomic backgrounds and among workers in various highly exposed occupational settings (chemical industry, building industry, acrobatic sports, etc.). On this topic, Lund and Rundmo [48] showed that, beyond the impact of cultural values, overexposure to risks can increase perceived risk and even be transformed into psychosis or a feeling of helplessness, leading to fatalism.

We have also seen that, depending on various identities, people's spontaneous causal explanations of accidents can be very defensive, tending to be based on external causes. Identification processes appear to make people more prone to ethnocentric biases as they strive to defend their self-esteem or that of ingroup members (as opposed to outgroup ones). And we have seen that explanations vary across cultural identities, in such a way that they influence the safety climate in organizations at the same time as they are influenced in return.

The observations made in this chapter have critical implications for safety prevention and management. First of all, they point out the limitations of preventive measures indiscriminately aimed at people in general. They stress the utility of devising more targeted messages specifically geared to individual, collective, occupational, and cultural identities, etc. ([8], [10], [19], [50]). Prevention messages should be adapted to the culture of each organization and each society, but also to that of each individual or group of individuals. To this end, it is crucial that the target population's representations and beliefs be taken into account in prevention campaigns by grounding campaign messages not only on spontaneous or naive explanations, but also on perceptions about risks and their prevention.

Knowledge of naive explanations of accidents can be very useful for safety expertise and experience-based analysis of accidents, as well as for elaborating risk communications and prevention messages ([8], [9], [10], [17], [19], [27]). Indeed, studies on this issue have shown that defensive explanations — which are often produced in situations where different identities are concurrently present — are likely to lead to biased accident reports and analyses, both

intentional and unintentional. Given the high stakes and negative implications of an accident, people may attempt to conceal facts they deem self-incriminating or likely to incriminate other members of their group. What's more, such biases may generate conflicts or confusions during accident-analysis sessions, not only about what causes should be considered important but also about what measures should be taken. Depending on his/her different identities, an individual may be tempted to defend or justify, even minimize, the role of elements likely to point to him/herself (or to an ingroup member) as a cause. As Shamir (1991, quoted by Petriglieri [5: 644] said, "Although identities can and do change, individuals are strongly motivated to maintain and enact their identities in their current state in order to achieve a sense of stability and continuity over time, as well as to maintain a high level of self-regard" [5: 644]. Lastly, taking causal explanations into account can help increase the perceived relevance and effectiveness of preventive measures. As stated by Kouabenan [19], the important thing here is not so much that the causal inferences be truly accurate, nor that the safety measures be truly effective. What counts above all is that those who have to put them into effect are persuaded of their accuracy and effectiveness, and thereby adhere to them. Adherence is only possible, however, if these individuals perceive a link between the prevention measures defined, and what they judge to be the causes of accidents [19: 252]. Finally, studies have demonstrated a strong link between perceived risk and the adoption of safe behavior ([25], [49], [51], [52], [53]). Like naive accident explanations, risk perceptions can be biased by various processes. Some of the most well-known biases are the superiority bias, comparative optimism, the self-conformity bias, the illusion of control, and the invulnerability bias. These biases, also called positive illusions, generally lead to an underestimation of risk and a positive self-presentation. Yet when an individual underestimates risks, he/she may be tempted to think that prevention measures are not for the self. Indifference or neglect of safety procedures and prevention messages ensues, leading in turn to higher exposure to risks and accidents. Hence, knowledge of biases in risk perception and their underlying psychological mechanisms becomes critical for understanding risk behaviors and defining targeted preventive actions likely to be effective. Indeed, "it is



assumed in numerous self-protective models in health psychology that the less biased or erroneous a person's perceptions of a risk are, the more likely he/she will be to adopt safe behaviors" [43: 90-91]. The idea here is not necessarily to eliminate all biases, but at least to make the concerned actors aware of them so that they can better assess their true level of risk exposure and adopt the necessary protective measures.

In conclusion, let us mention that taking beliefs into account, by way of the naive explanations and perceptions they convey, seems to be a worthwhile and promising avenue not only for defining more effective preventive measures but also for instigating long-lasting safety behaviors. This approach is costly and time-consuming, however, since it requires acting on a case-by-case basis and considering the specificity or identity of each organization or group targeted by the safety campaign. But can one put a price on life and health?

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## REFERENCES

- [1] Piaget, J., Sinclair, H., & Bang, V., 1968, *Epistémologie et psychologie de l'identité*, Presses Universitaires de France: Paris.
- [2] Kouabenan, D.R., Cadet B., Hermand, D., & Muñoz Sastre, M.T. (eds), 2006, *Psychologie du risque: Identifier, évaluer, prévenir*, De Boeck: Bruxelles.
- [3] Sainsaulieu, R., 1977, *L'identité au travail*, Presses de la Fondation Nationale des Sciences Politiques : Paris.
- [4] Green, J., 1997, Risk and the construction of social identity: children's talk about accidents, *Sociology of Health & Illness*, 19(4), 457-479.
- [5] Petriglieri, J.F., 2011, Under threat: Responses to and the consequences of threats to individuals' identities, *Academy of Management Review*, 36(4), 641—662.
- [6] McDonald, R., Waring, J., Harrison, S., 2005, "Balancing risk, that is my life": The politics of risk in a hospital operating theatre department, *Health Risk & Society*, 7 (4), 397-411.
- [7] Kouabenan, D.R., 1985, Degree of involvement in an accident and causal

attributions, *Journal of Occupational Accidents*, 7, 187-194.

- [8] Kouabenan, D.R., 1999, *Explication naïve de l'accident et prévention*, Presses Universitaires de France : Paris.
- [9] Kouabenan, D.R., 2002, Occupation, driving experience, and risk and accident perception, *Journal of Risk Research*, 5 (1), 49-68.
- [10] Kouabenan, D.R., 2009, Role of beliefs in accident and risk analysis and prevention, *Safety Science*, 47, 767-776.
- [11] Shaw, J.I., & McMartin, J.A., 1977, Personal and situational determinants of attribution of responsibility for an accident, *Human Relations*, 30, 95-107.
- [12] Whitehead III, G.I., & Hall, A.E., 1984, Sex differences in the assignment of responsibility for an accident, *Sex Roles*, 11, 787-798.
- [13] Walster, E., 1966, Assignment of responsibility for an accident, *Journal of Personality and Social Psychology*, 3, 73-79.
- [14] Breslin, F.C., Polzer, J., MacEachen, E., Morrongiello, B., & Shannon, H., 2007, Workplace injury or "part of the job"? Towards a gendered understanding of injuries and complaints among young workers, *Social Science and Medicine*, 64, 782-793.
- [15] Shaver, K.G., 1970, Defensive attribution: Effects of severity and relevance on the responsibility assigned for an accident, *Journal of Personality and Social*, 14, 101-113
- [16] Kouabenan, D.R., Gilibert, D., Medina, M., & Bouzon, F., 2001, Hierarchical position, gender, accident severity and causal attributions, *Journal of Applied Social Psychology*, 31(3), 553-575.
- [17] Gyekye, S. A., 2010, Occupational safety management: The role of causal attribution, *International Journal of Psychology*, 45 (6), 405-416.
- [18] Niza, C., Sila, S., & Lima, M.L., 2008, Occupational accident experience: Association with workers' accident explanations and definition, *Safety Science*, 46, 959-971.
- [19] Kouabenan, D.R., 2006, Des croyances aux comportements de protection — 1ère partie: quels apports des études sur l'explication spontanée des accidents au diagnostic de sécurité et aux actions de prévention? D.R Kouabenan, B. Cadet D.,



Hermand, M.T. & Muñoz Sastre (Éds), *Psychologie du risque: Identifier, évaluer, prévenir*, 241-258, De Boeck : Bruxelles.

- [20] Kouabenan, D.R., 2013, Naive causal explanation as a way of accident analysis and prevention, J. M. Peiro & C. Molina, *International Yearbook on Psychosocial Risk Prevention and Quality of Life at Work*, 45-70, Edition: Secretary of Labour Health and Environment, UGT-CEC. Designs and Prints: Blanca impresores, S.L., Spain.
- [21] Mbaye, S. & Kouabenan, D.R., 2013, How Perceptions of Experience-Based Analysis on Work Accidents Explanation, *Journal of Safety Research*, 47, 75-83.
- [22] Dejoy, D.M., 1987, Supervisor attributions and responses for multicausal workplace accidents, *Journal of Occupational Accidents*, 9, 213-223.
- [23] Brickman, P., Ryan, K., & Wortman (1975). Causal chains: Attribution of responsibility as a function of immediate and prior causes. *Journal of Personality and Social Psychology*, 32, 1060-1067.
- [24] Kouabenan, D.R., 2001, Culture, perception des risques et explication des accidents, *Bulletin de Psychologie*, 54 (3), 327-342.
- [25] Morris, M.W., & Peng, K., 1994, Culture and cause: American and Chinese attributions for social and physical events, *Journal of Personality and Social Psychology*, 67, 949-971.
- [26] Wang, G., & McKilip, J., 1978, Ethnic identification and judgements of an accident, *Personality and Social Psychology Bulletin*, 4, 296-299.
- [27] Gyekye, S.A., 2006, Workers' perception of workplace safety: An African perspective, *International Journal of Occupational Safety & Ergonomics (JOSE)*, 12(1): 31-42.
- [28] Choi, I., Nisbett, R., & Norenzayan, A., 1999, Causal attribution across cultures: Variation and universality. *Journal of Personality and Social Psychology*, 125, 47-63.
- [29] Hogarth, R.M., Portell, M., & Cuxart, A., 2007, What risks do people perceive in everyday life? A perspective gained from the experience sampling method (ESM), *Risk Analysis*, 27(6), 427-39.
- [30] Finucane, M.L., Slovic, P., Mertz, C.K., & Flynn, J., 2000, Gender, race, and

perceived risk: the "white male" effect. *Health, Risk & Society*, 2, 159-172.

- [31] Flynn, J., Slovic, P., & Mertz, C.K., 1994, Gender, race, and perception of environmental health risk, *Risk Analysis*, 12, 161-176.
- [32] Rundmo, T. & Iversen, H., 2004, Risk perception and driving behaviour among adolescents in two Norwegian counties before and after a traffic safety campaign, *Safety Science*, 42, 1-21.
- [33] Johnson, B.B., 2002, Gender and race in beliefs about outdoor air pollution, *Risk Analysis*, 22, 725-738.
- [34] Yagil, D., 1998, Gender and age-related differences in attitudes toward traffic laws and traffic violations, *Transportation Research, Part F*, 1, 123-135.
- [35] Cestac, J., Paran, F. & Delhomme, P., 2011, Young drivers' sensation seeking, subjective norms, and perceived behavioural control and their roles in predicting speeding intention: how risk-taking motivations evolve with gender and driving experience, *Safety Science*, 49, 424-432.
- [36] Dejoy, D.M., 1989, The optimism bias and traffic accident: Risk perception, *Accident Analysis and Prevention*, 21, 4, 333-340.
- [37] McKenna, F.P., Stanier, R.A., & Lewis, C., 1991, Factors underlying illusory self-assessment of driving skill in males and females, *Accident Analysis and Prevention*, 23, 45-52.
- [38] Igra, V. & Irwin, JR, C.H., 1996, Theories of adolescent risk-taking behavior, R.J. Di Clemente, W.B. Hansen, & L.E. Ponton, *Handbook of Adolescent Health Risk Behavior*, Plenum Press: New York.
- [39] Jonah, B.A., 1986, Accident risk and risk-taking behaviour among young drivers, *Accident Analysis and Prevention*, 18, 255-271.
- [40] Matthews, M.L., & Moran, A.R., 1986, Age differences in drivers' perception of accident risk: The role of perceived driving ability, *Accident Analysis and Prevention*, 18, 299-313.
- [41] Nordfjaern, T. & Rundmo, T., 2009, Perception of traffic risk in an industrialised and a developing country, *Transportation Research, Part F*, 12, 91-98.
- [42] Arezes, P.M., & Miguel, A.S., 2008, Risk perception and safety behaviour: A study in an occupational environment, *Safety Science*, 46(6):900-907.



- [43] Kouabenan, D.R., Dubois, M., Scarnato, F., De Gaudemaris, R., & Mallaret, M.R., 2007, Methicillin-resistant staphylococcus aureus risk perception by healthcare personnel in a public hospital, *Social Behavior and Personality*, 35 (1), 89-100.
- [44] Bellrose, C.A., & Pilisuk, M., 1991, Vocational risk tolerance and perceptions of occupational hazards, *Basic and Applied Social Psychology*, 12, 303-323.
- [45] Lancaster Patient Research Unit, 2013, Risk, safety and identity. <http://www.lpsru.org.uk/risk-safety-identity.html>.
- [46] Arfanis, K., Shillito, J., & Smith, A., 2011, Risking safety or safely risking? Healthcare professionals understanding of risk-taking in everyday work, *Psychology, Health & Medicine*, 16, 66-73.
- [47] Weber, E.U., Hsee, C.K., & Solowska, J., 1998, What folklore tells us about risk and risk taking: Cross-cultural comparisons of American, German, and Chinese proverbs, *Organizational Behavior and Human Decision Processes*, 75, 170-186.
- [48] Lund, I.O., & Rundmo, T., 2009, Cross-cultural comparisons of traffic safety, risk perception, attitudes and behavior, *Safety Science*, 47(4), 547-53.
- [49] Mearns, K., & Yule, S., 2009, The role of national culture in determining safety performance: Challenges for the global oil and gas industry, *Safety Science*, 47, 777-85.
- [50] Devos-Comby, L. & Salovey, P., 2002, Applying persuasion strategies to alter HIV-relevant thoughts and behavior, *Review of General Psychology*, 6 (3), 287-304.
- [51] Mbaye, S., & Kouabenan, D.R., 2013, Effects of the feeling of invulnerability and the feeling of control on motivation to participate in experience-based analysis, by type of risk, *Accident Analysis and Prevention*, 51, 310- 317.
- [52] Weinstein, N.D., Kwitel, A, McCaul, K.D, Magna, R.E., Gerrad, M., & Gibbons, F.X., 2007, Risk perception: assessment and relationship to influenza vaccination, *Health Psychology*, 26, 146-151.
- [53] Weinstein, N. D., 1993, Testing for competing theories of health protective behavior, *Health Psychology*, 12, 324-333.