Envisioning risks:
the attentional cycle of risk framing

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Résumé :

In an increasingly complex and uncertain environment, envisioning risk has become a critical managerial ability. However, determining *ex ante* which issues are relevant "risk" is challenging, since it requires organizational attention, which is a scare resource. This paper explores the process "risk framing", i.e. the process through which risk is constructed as a frame that both shapes and reflects managerial attention. By examining the processes through which twelve organizations from various sectors determine their risks, we reveal four modes of risk framing: capture, revelation, incorporation and assimilation. Each mode relies on distinct attentional mechanisms, and results in particular frames of risk. Findings suggest that each mode constitutes a stage of an attentional cycle, through which organizations build their own representations of risks, which become, in turn, a structure that drives managerial attention. Those findings provide a better understanding of what organizations call a "risk". This study sheds light on the mechanisms through which managers envision risk, by constructing collective representations of their environment.

Mots-clés : Risk, Framing, Attention, Strategy.

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INTRODUCTION

> *"When do we realize that there is a risk? It is a bit of chemistry, hard to describe. But it must not be discouraging, it must not distract. It means on the contrary that it is top managers' time, top managers' attention, management teams' collective intelligence. The more intangible and virtual, the more you must compensate like this." (Top manager of a service company)*

In a growing uncertain environment, identifying and addressing current and future risks has become is considered as crucial ability for organizations (Arena, 2010). Risk has become a predominant topic in organizational activities (Maguire & Hardy, 2016a), leading to a flourishing plethora methods and frameworks to manage risk of all kinds (Power, 2004). However, defining *ex ante* what are the relevant issues to consider as risks remains particularly challenging for managers (OECD, 2014). In this context, understanding how organizations envision risks is a critical issue.

As risk remains an ambiguous concept in academic literature (Taylor-Gooby, 2006), some scholars have called for the need to better understand the mechanisms through which organizations define and represent what they call a "risk" (Power, 2016). Considering risk as a social construct instead of an objective calculation (Hilgartner, 1992), recent studies have focused on the discourses (Maguire & Hardy, 2013), communication (Kasperson et al., 2008) and interactions, through which collective representations of risk emerge.

While those studies acknowledge that risk reflects the attention paid to specific aspects of the environment (Boholm & Corvellec, 2011), existing researches have paradoxically overlooked the role of attention in constructing representations of risk (Ocasio, 2005). Attention here refers to the mechanism through which managers allocate their time and efforts on a limited number of issues (Ocasio, 1997). As a scare resource (Simon, 1947), attention plays a determinant role in selecting issues and developing a collective understanding of their riskiness (Boholm & Corvellec, 2011). However, we know little about how attention shapes risk representations and how, in turn, those representations influence managerial attention.

To address this gap, we propose to consider risk as a "frame" (Henwood et al., 2008) and to explore the process of "risk framing". Frames are here defined as collective schemata of interpretation used in organizations to reduce complexity and make sense of reality (Goffman, 1974). Embodied in managerial tools and devices that provide representations of risk, frames both reflect and shape how managerial attention is distributed (Hahn et al., 2015; Cornelissen & Werner, 2014). In this paper, we focus on the process of risk framing, through which organizational actors elaborate and use collective representations of risks. This article thus asks the following research question: *what are the attentional mechanisms that underpin risk framing?*

To answer this question, we draw on a qualitative multi-case study. Through semi-directive interviews and documentation, we reconstitute and compare 36 processes of risk framing in twelve organizations from various industries. Findings reveal that risk framing occurs through four distinct modes. Each mode relies on distinct attentional mechanisms, and results in particular frames of risk. Those four modes seem to constitute the successive stages of the "life cycle" of risk in an organization: through risk "*capture*", an issue becomes an object of attention, as some actors locally perceive its riskiness Then, through risk "*revelation*", actors express the issue in specific terms, so that it is officially labelled as a risk at the organizational. Once this official status has been obtained, through risk "*incorporation*", the risk is embodied in the structures of the organization. It serves as a principle for defining roles, rules, knowledge or activities. Finally, through risk "*assimilation*", risk becomes a rite that orchestrates daily activities, while actors re-appropriate its meaning.

This study makes several contributions. First, by highlighting the framing process underpinning risk, we contribute to the recent calls for a better theorization of risk as a social construct (Boholm & Corvellec, 2011; 2016). We offer a novel way to conceptualize risk, as two-facets frame: risk as an issue *versus* risk as a structure. Second, we provide a better understanding of the social processes of risk construction (Maguire & Hardy, 2013). We distinguish emergent and deliberate attention, which provides a lens to describe the day-to-day practices through risk acquire its meaning and representation within organizations (Power, 2016). Third, in line with recent research on strategic framing (Litrico & David, 2017; Cornelissen & Werne, 2014), we contribute to enhance our understanding the organizational mechanisms through which actors frame issues. Finally, our study has managerial implications, as it provides insights to enhance organizations' ability to envision risks.

This paper is structured as follows. First, we expose the theoretical background of this research. Then, we describe our methodology, followed by the findings. We conclude with a discussion of the implications of our study, its limitations, and we provide some directions for further research.

THEORETICAL BACKGROUND

This section exposes our theoretical lens. After introducing the concept of risk as social construct (1.1), we point out the need to better understand the role of attention in its process of construction (1.2). To articulate the two concepts of risk and attention, we draw on the concept of risk "framing" (1.3). We conclude by formulating our research question.

1.1. RISK AS A SOCIAL CONSTRUCT

As an inherent component of business, the concept of risk encompasses a prominent literature in the management field. Despite the importance of the concept, scholars still struggle to reach a consensus on the meaning of risk (Taylor-Gooby, 2006). In particular, literature oscillates between two paradigms. On the one hand, the objectivist paradigm, largely dominant in risk models, conceives risk as an external reality external. Knights (1921)'s widespread definition suggests that risk reflects a situation involving uncertainty about outcomes or consequences (Knight, 1921). On the other hand, the constructivist paradigm, based on a principle of "absolute relativism" (Dean, 1998), conceives risk relatively to the values of a social group: risk threatens what a group attributes to a particular value (Hilgartner, 1992). Risk is therefore a relative phenomenon, culturally embedded in a social reality (Jasanoff, 1998), which gives objects a risky character or not. This absolute relativism (Boholm, 2003) is summarized by the formulation of Ewald (1992): "*Nothing is a risk in itself, there is no risk in reality. But on the other hand, everything can be a risk; it all depends on how we analyse the danger and we consider the event*".

Between those two paradigms, literature provides a wide range of approaches on risk. The most prominent in strategic literature inherit from the objectivist paradigm, and focuses on firms' attitude toward risk, by examining how managers perceive risk, as a possible loss in a situation of choice under uncertainty (March & Shapira, 1987; MacCrimmon & Wehrung, 1996). This literature provides a large panel of studies that examines risk taking conditions and consequences, drawing on the behavioural theory of the firm (Hu, Blettner, & Bettis, 2011), the prospect theory (McNamara & Bromiley, 1999; Palmer & Wiseman, 1999) or the agency theory (Wiseman et Gomez-Mejia., 1998). Other studies on organizational disaster focus on the sources of the materialization of risk, as the consequence of either technological complexity (Perrow, 1984) or human misconduct (Vaughan, 1999). Those different approaches rely on pre-existing conceptions of *what* risk is.

Alternatively, the approach on risk as a social construct (Maguire & Hardy, 2013) invites to consider risk as a social construct, and to interrogate what organizations tend to call a "risk" (Hutter & Power, 2005). According to this approach, an object "becomes" risky when individuals associate it with a harm toward their values (Boholm & Corvellec, 2011; Hilgartner, 1992).

In line with this approach, in this paper, we consider that risk as a notion that reflect specific organizational actors' interpretations. Risk can thus be studied through its diverse representations in organizations: discourses toward risk objects (Maguire & Hardy, 2013, Chadwick & Foster, 2014), risk management devices such as risk mapping tools (Jordan et al., 2013), or risk frameworks that provide repertoires and categories of interpretation (Demortain, 2016). Unfolding how those representations of risk emerge within organizations constitutes a relatively recent research agenda (Power, 2016). In particular, the next section will show that the role of attention remains an overlooked core mechanism to understand what risk means for an organization.

1.2. ATTENTION AND RISK

A central idea of the social construction of risk is that risk is closely linked to the attention it receives and generates (Ocasio, 2005). Attention refers to the noticing, encoding, interpreting and focusing of time and effort by organizational actors, on a limited set of issues and answers (Ocasio, 1997, p. 189). It constitutes a mechanism through which firms deal with their limited resources and bounded rationality, to select and address issues (Simon, 1947).

Following the "social" definition of risk, objects become risk from the moment actors identify them and take them into consideration, by assigning them a certain interpretation (Boholm & Corvellec, 2011). Therefore, attention works as an enlightening mechanism that "makes" an object a risk. The construction of risk thus requires special attention to certain objects, whether it is to detect them among the many signals of the environment, or to focus efforts to evaluate them (Weick & Roberts, 1993; Weick et al., 1999). Some risks also result from the lack of attention given to them, such as ignored weak signals, which turn into a materialized problem (Starbuck & Milliken, 1988). Risks raise attentional challenges, as their materialization can result from the failure of arbitrating between different aspects to address. For instance, Starbuck and Farjoun (2005) showed that the Columbia's disaster was, among other reasons, due to pressures on financial performance goals, which led the NASA to make the decision of launching the shuttle, despite existence of multiple alerts on technical problems (Starbuck & Farjoun, 2005). Attention also seems to result from risk construction: recognizing the existence of a risk generates organizational responses such as regulating actions (Power, 2007), which reflect a form of organizational attention (Weick & Sutcliffe, 2006). Attention is also produced, diminished or fed by the communication of risk around these risks: by exposing their messages, media amplify or decrease the focus of attention on certain aspects of these risks (Kasperson et al., 1988).

Despite the acknowledged tight relation between risk and attention, literature on risk has not explicitly studied the role of attention in the process of risk construction. Yet, attention seems to exert a complex and ambiguous influence on the identification, the interpretation and the representation of risk. Empirical studies on how organizations deal with risk provide a plethora of contradictory situations. For instance, while some studies suggest that individuals may pay more attention to familiar issues, others show that the banality of an issue prevents manager from detecting it as a risk (Madsen et al., 2016). Another example lies in the fact that top managers may address more easily risks that are in line with existing structures such as strategic priorities (Bansal, 2003). This observation contradicts the "information climbing phenomenon", according to which risks creating a dissonance with existing structures have a better chance to reach top managers' attention, as they will climb managerial levels if no direct solution can be found (Dillon et Tinsley, 2008).

An implicit common point in those situations is the notion of *frame*, which seems to intervene as an interface between risk and attention: the meaning that actors attach to risk seems to work as an attentional filter. At the same time, risks seem to derive from the nature and amount of attention that actor mobilize to elaborate schemas of risk interpretations. In the next section, we draw on the notions of *frame* and *framing,* as promising conceptual lens to address those issues.

1.3. RISK FRAMING

Frames can be defined as "schemata of interpretation" on which managers rely "*to locate, perceive, identify, and label events in their own terms*" (Goffman, 1974, p. 21). In this sense, frames here differ from mental models, as they do not only reside individuals' perceptions, but derive reflect a larger social and cultural context (Schön & Rein, 1994). They represent collectively shared representations of reality (Goffman, 1959): there are institutionalized lenses that guide organizational actors' interpretation and definition of particular issues (Miller, 2000). As actors elaborate different frames according to their context and history (DiMaggio, 1997), they explain why different actors may have a different representation of a same situation.

Framing refers to the practices intended to produce and mobilize frames (Bach & Blake, 2016). It is an "active processual phenomenon that implies agency and contention at the level of reality construction" (Benford and Snow 2000, p. 613). Framing includes deliberate communications (Bach & Blake, 2016), Organizations can be seen as structures where actors share a variety of frames at different levels (Nutt, 1998). The process of framing is thus a creative process that involves both moving and "freezing" activities. For instance, adopting a new frame requires negotiation processes in which some actors intend to impose their own vision (Benford, 1993; Kaplan, 2003)

We suggest that the notion of framing provides a useful lens to apprehend how risk and attention relate one with another. On the one hand, attention is at the core of framing (Bundy et al., 2013; Bansal, 2003; Shepherd et al., 2016). Frames are shaped by attention, which lead actors to select and attribute greater importance to particular aspect of situations (Entman, 1997). Scholars have acknowledged framing as a crucial element in strategic processes (Nutt, 1998). Complexity of the environment make it necessary to simplify it by using shortcuts and bias (Schwenk, 1984; Tversky & Kahneman, 1976). According to those studies, strategists frame two aspects in decision-making: issues and the control they have on those issues (Chattopadhyay et al., 2001; Thomas et al., 1993). Studies on strategic cognition and strategic agenda building outline the filtering mechanisms that lead decision-makers to select and emphasize some issues rather than others (Bundy et al., 2013; Bansal, 2003; Dutton, 1986). A stream of research specifically focus on the way actors categorize and label issues, either as a threat or as an opportunity (Dutton & Jackson, 1988). Literature on issue-selling highlight the framing of issues as a tactic to draw top management's attention (Dutton & Ashford, 1993;

2001). Framing a situation either as a threat or an opportunity influences decision-makers' choices, and thus redistribute organizational resources (George, Chattopadhyay, Sitkin & Barden, 2001).

On the other hand, risk can be considered as one of the most common frames used by organizations (Hoffman, 2001). As Henwood et al. (2008) suggest, the perception of the "riskiness" of a situation will depend on a variety of frames used by managers. Seo, Goldfarb and Barrett (2010) outline the role of decision framing on risk taking. Furthermore, as risk is increasingly institutionalized as an organizing principle (Maguire & Hardy, 2016), it is more and more expressed and represented as a frame itself. Recent studies outline the spread of risk management frameworks such as Enterprise Risk Management frameworks (Mikes, 2012; Power, 2004), which formalize how organization should identify, assess and manage their risk in a holistic way (Arena et al., 2010). As shown by recent studies, through frameworks, risk acquire diverse representations, such as mappings (Jordan et al., 2013) grids of impact and probabilities (Renn, 2008) or criteria of assessment (Demortain, 2016). Those studies indicate that the elaboration and the mobilization of risk as a framework involve the crystallization of actors' interpretations. The concept of framing is also gaining recognition in literature on risk, as a way to account for social representations of a risk, within specific contexts or institutions. They describe the representations of risk by examining the categories in communications (Allan et al., 2010) or inquiries (Behr, Grit, Bal & Robben, 2015). Nevertheless, those studies rather focus on describing risk frames rather than explaining the mechanisms from which those frames emerge.

To examine processes of framing prior research provides different conceptual dimensions. First, framing involves a focus on social practices performed by actors such as sensemaking practices (Hahn et el., 2015) or the elaboration of narratives (Sonenshein, 2010). Second, studying framing requires identifying and tracking frames as the output of the process. Frames evolve continually within organizations (Litrico & David, 2017) and are embodied through a variety of artefacts, such as strategic tools (Kaplan, 2008; Jarratt & Stiles, 2010). Finally, framing is a situated process: it occurs within particular social and cultural context, which shapes the way actors frame (Nelkin, 1988). Context provides pre-established schemata of interpretations that enable or constraint the ability of "seeing" new risks, when this implies the noticing of aspects that are not currently considered as relevant by organizational frames. Context also provides obstacles and triggers to framing: regulation may for example push some organizations to engage important efforts of framing, such as bank and insurance industry for risk management (Mikes, 2008).

To summarize, we aim at contributing to the literature on risk construction, by responding to the recent call for a better understanding of the social mechanisms that underpin the construction of risk within organizations (Power, 2016). In particular, we aim at unfolding the role of attention in the construction of risk, by examining the process of risk framing. We thus address the following research question: *what are the attentional mechanisms that underpin risk framing?*

2. METHODOLOGY

To explore the attentional mechanisms of risk framing, we rely on a qualitative multi-case study. In this section, we present the empirical context of this study (2.1). Then, we expose our methods to collect (2.2) and to analyze our data (2.3).

2.1. RESEARCH CONTEXT

To perform our analysis of risk framing, we selected a sample of thirty-six risk framing processes in twelve organizations from various industries. To address our research question, a qualitative case study case was necessary, as examining a social process such as risk framing require descriptions of managerial practices and perceptions. (Yin, 2003). Moreover, we chose a multiple case study, to allow the transferability of our results to various contexts (Koenig, 2005). Indeed, our literature review has outlined the embedded nature of risk framing, by highlighting the role, for instance, of institutional and regulated context.

This "analytic" generalization (Strauss & Corbin, 1990) is based on theoretical sampling (Yin, 2003). We constructed our sample according to two criteria (Hlady-Rispal, 2002; Eisenhardt, 1989). On the one hand, to allow date comparison across cases, we selected similar organizations, i.e. large French organizations. As risks can be very heterogeneous (e.g. financial risks, operational risks, human resources risks, etc.) we focused on organizations that mobilize the same risk framework, “Enterprise Risk Management” (ERM), which consists in addressing all kinds of risk in a holistic and comparable way (Mikes, 2012). ERM consists in identifying, evaluating and managing in a holistic and coordinated way all the risks that impact the organization (COSO, 2004; ISO 31 000; 2009). ERM is generally orchestrated by a risk manager or Chief Risk Officer (Amrae, 2017). Focusing on organizations using ERM was also useful to ensure that risk frames were “visible” and tangible, since ERM implies processes of formalizing and centralizing the risk management methods and tools that are used within the organization (Arena et al., 2010).

On the other hand, to allow case generalization, we varied two criteria. First, we selected organization from different industries. In fact, although using similar ERM frameworks, framing practices may vary as external regulation and industry mimetic practices vary from a sector to another. Second, we selected organizations with different levels of ERM "seniority": indeed, risk framing practices may depend on the degree to which ERM frameworks are infused within the organization. Those two criteria led to the selection of twelve cases, which are presented in Table 1.

TABLE 1. Sample of cases

Organization	Industry	Size	ERM seniority
BigBank	Bank	<100.000	High
Banko	Bank	<150.000	Low
Industrilus	Heavy industry and energy	<100.000	Low
Industory	Heavy industry and energy	<150.000	High
Indugiga	Heavy industry and energy	<150.000	High
Ingénolux	General industry (telecom)	<50.000	Low
Pharmatrix	General industry (pharmacy)	<50.000	Low
Spidity	General industry (automotive and transport)	<200.000	High
MobiliT	General industry (automotive and transport)	<100.000	High
Serviceo	Services	<200.000	High
Admitop	Services	<50.000	High
EnvirOrg	Services	<50.000	Low

2.2. DATA COLLECTION

The multiplication of cases constraints the ability to collect internal data. Therefore, to ensure a satisfactory volume of data for each case (Eisenhardt, 1989), we focused data collection on three specific risk framing processes. We derived our empirical methods from researches that study organizational processes through a limited set of interviews (e.g. Dean & Sharfman, 1996; Harris & Sutton, 1986).

Data collection relied mainly on semi-directive interviews. For each case, we systematically interviewed managers involved in risk framing processes at three different levels: a top manager, an operational manager, and a risk manager of the same entity. The combination of those three perspectives allowed providing rich descriptions of risk framing activities, as well as how managers make sense of their own practices perceptions (Balogun, Jacobs, Jarzabkowski, Mantere, & Vaara, 2014). We conducted a total of 46 interviews, which lasted 80 minutes on average and were fully recorded and transcribed. Interviewees were asked to describe three risk framing processes that were previously determined, by asking them to relate three examples of situations where they were led to identify, assess or deal with risks in their activity. We used an interview grid including the following topics: context of the situation, topic of the issue, main steps and activities, artefacts used to address risks, description of risk representations. They also provided their own perception of the process. Interviews lasted 80 minutes on average. They were fully recorded and transcribed.

Additionally, we gathered secondary data, including a literature review, as well as previous observations on two of the cases. Documentation included risk management reports, risk maps, tools, or other documents related to the representation of risk in the described processes.

Table 2. Data collection

Case	Interviews			Total
	Top Manager	Operational Manager	Risk Manager	
BigBank	1	1	1	**3**
Banko	1	1	1	**3**
Industrilus	1	1	1	**3**
Industory	3	2	2	**7**
Indugiga	1	1	1	**3**
Ingénolux	1	1	1	**3**
Pharmatrix	1	1	1	**3**
Spidity	1	1	1	**3**
MobiliT	1	1	1	**3**
Servicéo	1	3	3	**7**
Admitop	1	1	1	**4**
EnvirOrg	1	1	1	**4**
Total	**14**	**17**	**15**	**46**

2.3. Data analysis

We analysed the data in three steps: a thematic coding, a processual analysis and a cross-case inductive coding. First, through a thematic coding, we structured the data in order to construct general narratives of the strategic processes mentioned by the interviewees (Miles & Huberman, 2004). By doing so, we created compilation of verbatim and documentation extracts for each of the 36 risk framing processes (3 by case). Appendix 1 provides a list of the topic of those processes.

Second, to reconstruct the processes of risk framing, we performed processual analysis (Langley, 1999). It allows explaining how and why social phenomena emerge and evolve over time (Langley, Smallman, Tsoukas, & Van de Ven, 2013). It is particularly useful for theorizing phenomena of social construction (eg. Bingham & Kahl, 2013, Maguire & Hardy, 2013), because it focuses on the succession of activities by which phenomena are formed: it thus makes it possible to identify the key stages and turning point within a process. To do so, for each process, we identified its constitutive incidents (Van de Ven, 1992). An incident is here defined as a delimited activity in time and space, which impacted risk meaning or representation during the strategic process. By doing so, we delimited 602 incidents were delimited (approximately 17 by process), and coded them by using a thematic grid in a database (Van de Ven, 1990). The thematic grid, derived from our conceptual lens, encompassed the following descriptive themes: managerial activities, characteristics of attention, artefacts' characteristics and risk representations. The database was used as an intermediary step to reconstitute strategic processes. A total of 602 incidences were identified and coded in a "meta-database", to allow an inter-case analysis (see Appendix 2).

Third, to highlight the mechanisms of risk framing, we intended to identify similarities and differences between the risk framing processes (Maitlis, 2005). We compared how attention was involved in each process and the characteristics of risk representation. To analyse the role of attention, we drew on Ocasio (2011)'s typology of attention. We considered three forms of attention: selective attention (an issue is "selected" by managers and entered actors' repertoires), engaged attention (actors focus intense cognitive efforts to enhance their understanding of specific issues) and distributed attention (managers allocate organizational resources in time and space, toward pre-established directions). The appendix 2 provides empirical evidence of the forms of attention that we identified through this analysis. By comparing attentional characteristics and risk representation across the 36 processes, we identified distinct modes of risk framing, which we present in the findings section.

3. FINDINGS

This section exposes our two main findings. First, we found that in the 36 processes, risk framing occurred through the same attentional mechanisms: the succession of selective, engaged and distributed attention (3.1). Second, despite this similar mechanic, we observed the output, i.e. risk frames. We found that risk framing differed according to two criteria: attentional focal (i.e. risk framed as an attentional object or framed as an attentional structure) and the attentional allocation (i.e. emergent or deliberate). Those criteria allowed identifying four modes of risk framing: capturing, revealing, incorporating and assimilating (3.2). Finally, our data suggest that those modes of risk framing constitute successive stages of an "attentional cycle", through which an issue gains the status of risk and is progressively adopted as a frame that drives further organizational activities (3.3).

3.1. Roles of risk focal and attentional direction in risk framing

Our first result concerns the role of attention as a core mechanism of risk framing. We found two main dimensions that distinguished the 36 processes described by interviewees: attentional focal and the attentional allocation.

Risk focal. By examining how risk was expressed by managers, or represented in managerial devices, we observed that the processes differentiated according to their risk focal. This means that in some processes, managers tended to consider risk as an object of attention (*object-driven processes*), while in others, managers mobilized risk as structure of attention (*structure-driven processes*). Indeed, in object-driven processes, managers described risk as the representation of an external phenomenon:

> "Social risk would be a work stoppage from employees, for example". (Operational Manager, Admitop).

As an object, risk could also be expressed in a more abstract way:

> "The social risk is necessarily controlled by the regional management. There are surveys, social barometer, which measure it." (Operational Manager, Admitop)

In object-driven processes, risk was also formulated in terms of potential actions or desired toward an external object. For instance, risk descriptions provided by managers or in documentation mentioned how the organization planned to act toward a specific risk:

> "You have a risk, it has been identified, certainly you cannot eradicate it, but you are asked to put in place special measures to be sure that this risk is realized as little as possible" (Risk Manager, Pharmatrix)

In contrast, in structure-driven processes, managers mentioned risk as a global and general combination of objectives, standards, and rules that regulate the functioning of the organization, as in the following example:

> "It really depends on the fact of imagining everything that can happen and saying what we do when it happens. It's really close enough to the logic of risk, with very Anglo-Saxon requirements, to describe what we will do to do it, to show that we did it, to trace everything we said." (Top Manager, Serviceo)

In this other example, risk refers to a specific domain of knowledge (techniques, methods, language, ...) that developed, used, capitalized, disseminated in the organization:

> "In operational risk, it is better to know the terrain and after learning the operational risk, because I learned it on the job, operational risk is not something I knew before." (Risk Manager, BigBank)

Therefore, depending on the risk focal, risk framing consists in framing risk as an object or as a structure. Object-driven framing consist in expressing a specific issue to give a particular meaning to it and the actions toward this issue. Structure-driven framing consist in elaborating norms, objectives, ways of structuring time and activities on a daily basis. These arrangements were visible in the speeches: the interviewees induced the way an object was managed when considered as a "risk", or mention "the risk" as a generic principle.

Attentional direction. Risk framing processes also showed significant differences in the way attention was directed toward risk along the process. Some processes were rather characterized by a deliberate attention (*deliberate processes*): they started from a managerial intention to apprehend risks within a decision process or a routine control activity, for instance. The initial attention was thus high and concentrated, and was finally dispersed through the time and across the organization. Vignette 1 provides an illustration of a deliberate process of risk framing.

VIGNETTE 1. Illustration of a deliberate process risk framing

The process of risk map actualization in Serviceo
The process of identifying and evaluating risks (via risk mapping), leads to the definition and implementation of risk management plans, in close collaboration with the executive committee (validation of the mapping, appointment risk managers, updating the map). ERM is also articulated with internal control and audit committees. A declination of the process of risk mapping at different levels of the organization. The process is structured into different annual campaigns, which rely on an automated tool to ensure formatted feedback. The interviews are very informal because the directors are used to the exercise. The list of risks is reviewed to identify possible changes.

In other processes, managers' attention was rather emergent (*emergent processes*): it started from a stimulus (internal or external) which led, without initial proper intention, to address a risk. Attention was initially weak and dispersed, and grew progressively, becoming more palpable and concentrated. Vignette 2 provides an illustration of an emergent process of risk framing.

VIGNETTE 2. Illustration of a deliberate process risk framing

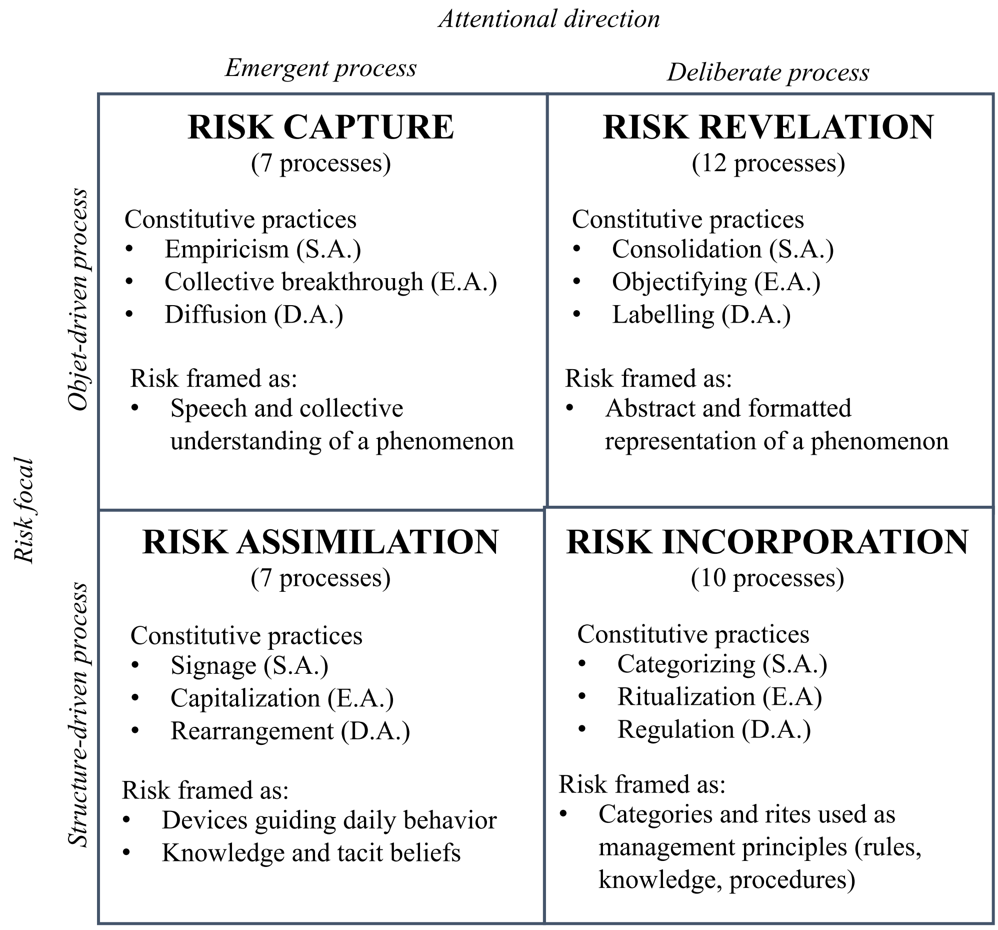
Application and evolution of crisis management methods on the field

The process describes how risk related to the safety of the production sites has been recently redefined. A few months ago, a director had to manage a flood on his site. As he relates, prior regular training facilitated the management of the situation. Nevertheless, while thinking to do their duty, some collaborators took initiatives to help the local populations, but were perceived in a negative way because partly misunderstood. The operations director believed this is was risk that was not correctly considered. Lessons have been learned through feedback to integrate this experience into existing procedures.

3.1. Four modes of risk framing

By combining the risk focal and attention direction, we determined four modes of risk framing: risk capture, risk revelation, risk incorporation and risk assimilation. We also found that each mode relies on specific practices. Each practice reflects a particular form of attention (i.e., selective attention, engaged attention, distributed attention), as shown in Figure 1 (inspired from Maitlis, 2005):

FIGURE 1. Four modes of risk framing



S.A. : Selected Attention
E.A.: Engaged Attention
D.A.: Distributed Attention

In this section, we present those four modes of risk framing, by describing their constitutive practices.

Risk capture

The first mode of risk framing is characterized by an emergent attention, in which organizations build risk as an object of attention. Through risk capture, managers detect and share information about emerging issues, which are not yet formally labeled as “risk” in their organization. This mode encompasses 7 of the 36 processes of our sample.

Empiricism. Selective attention occurred through managers’ interactions with their internal and external environment, as part of their daily activities, or by devices such as watch tools, which preselect information (e.g. news articles) considered relevant to be processed. Risk emerged from “selected” issues, unintentionally or "by chance" identified based on signals that existing people or devices are able to capture. For example, the competitive risk detected in Industory came from an observation of a manager by consulting the press:

> “Because I had seen .. What led me to spot it? Because one of the other facts that I quoted you, had had to appear a few days before, I said to myself: but how is it done? How is it done, if [...]? I say to myself: yes of course! I make sets, [...] and I sell that [...]. This is a strategy that makes perfect sense.” (Top Manager, Industory)

Collective breakthrough. Engaged attention occurred when managers focused a sustained attention effort (through exchanges, discussions, debates), to collectively interpret an object of attention. This effort resulted in recognizing the object as a risk: through the discourses, the risk manages more or less easily to make its "breakthrough", that is to say to be collectively given the meaning of risk. To be recognized, the risk must be more or less easy to break: sometimes it is easy for a person to warn of a risk that they have identified. It is enough for him to share the information so that the object is considered as a risk in a formal way. This is particularly the case when the person finds the appropriate channels to raise the object. It then translates the information it has so as to make it "intelligible", audible in terms of risk:

> “For example, there is a problem that emerges a little recurrent, which interests several trades, so we will ask the person who detected it to be presented in a board committee, to make a brief presentation, with a SWOT, and then from that, list the questions that arise, and we can rule in coding on decision-making.” (Operational Manager, Industory)

Diffusion. Distributed attention occurred through activities of information broadcasting. This redistribution involved different natures of resources. First, through discourses: risk became a subject that received growing attention in different parts of the organization, in which it circulated by being placed on the agendas of the meetings, or by being communicated informally. Beyond the meetings, managers described other types of interactions: informal exchanges and bilateral interviews, for example between several directors, or between a risk manager and another director. In these cases, the exchanges depended on the hierarchal links between actors, and the modes of coordination existing in the organization. For example, in the P2-Admitop process, the director identified a risk through exchanges with her network of regional directors, with whom she is accustomed to coordinate:

> "They call me from time to time, they can call me when they have problems, because suddenly I established a relationship of exchange, here ... The topic is that in general they know, it's going very fast, and it's relatively ... Well it's not very structured our stuff, what. [...] And sometimes the point of arbitration is Monday, and I'll see the directors on Wednesday. And I say to them: excuse me, for in 48 hours ... The mode, I say to them: if you have an opinion and that you can give it to me, so much the better. So I send, there are some who answer, there are some who do not answer, I do with what I have. And then, in general, I always call one or two." (Top Manager, Admitop)

Risk revelation

The second mode of risk framing refers to deliberate strategic processes, in which organizations build risk as attentional issue. An object that was already considered as risky by some actors (locally and / or informally) became formalized at the organization level. Through risk revelation, managers identified risks by deliberately filtering and formatting information according to preexisting criteria. Generally, top managers or risk managers broadcast risk analysis templates among the organization, in order to collect and centralize information about risks. In risk revelation, attentional mechanisms followed a deliberate logic. This mode encompasses 10 of the 36 processes of our sample.

Consolidation. selective attention occurred through the consolidation of pre-structured information. Managers identify, select, frame and consolidate risks, through feedback channels. The risk is thus « channeled » by specific channels. Risks were selected and formatted by channels that go back and make it appear explicitly as "risk" as defined by the organization. To enter these consolidation channels, risk must, however, comply with some criteria of form and substance. Risks were gradually translated and homogenized. For example, in Industory, managers waited to have enough information to decide to "create" a new risk:

> "We've gathered enough analysis and materials to say, now we're at risk." (Risk Manager, Industory)

Objectifying. Engaged attention occurred by objectifying information. The organization expresses the risk through formal interpretation schemes, which we call methods here. Risk was expressed and represented by various methods, which consist either of estimating a value as much as possible of the risk, or of representing the perception of the actors. Risks can also be documented, described, and formalized. They become "visible" and codified.

> "There is a lot of pooling, reflection, brainstorming, reactions to what others are saying, and that is where the opportunity and risk come from" (Top Manager, Banko)

Labelling. Distributed attention occurred through labelling information. The organization officially names a risk and places it in its formal repertoires. Risks received an "official" status in the organization, and is allocated resources (action plans, risk owner, etc.). The way in which risk wording is formulated can impact the meaning it receives:

> "[...] which brings us to close down group risks, to open new ones, to redefine group risk perimeters according to the lifts" (Risk Manager, MobiliT)

Risk incorporation

The third mode of risk framing refers to deliberate processes, in which organizations build risk as an attentional structure. This logic encompasses 10 of the 36 strategic processes of our sample. In risk incorporation, attentional mechanisms followed a deliberate logic.

Categorizing. Selective attention occurred through categorization practices: managers defined categories such as rankings, distinctions, or divisions, which will be used to share resources and distribute activities in relation to risk. These categories may reflect the current structure of the organization, be negotiated by stakeholders, or imported from external frameworks. The organization defined categories to "think" the risk. A category here refers to concepts that serve to operate rankings, distinctions or divisions (of things, activities) according to defined criteria:

> “We have control libraries, some of which are mandatory, or at least the entities have to justify if they do not deploy a control, and the same if you consider which control device is not adequate, does not operate satisfactorily Well, I would say that you also have an added value of the risk function, which is to warn, but ... Again, the control, and finally the essential element, is the risk. That is to say, control, it must be proportionate to the risk.” (Top Manager, Banko)

Ritualization. Engaged attention occurred through ritualization practices, the organization defines rites dedicated to risk: it establishes regular processes or instances in its operation, aiming to apprehend the risk. The organization puts in place organizational « rituals » dedicated to risk (establishment of an activity on a regular basis in the functioning of the organization).

> “And two or three years ago, in the beginning, the PMR, the risk management plan, was really seen as a species, a formal obligation to be fulfilled for the seat, whereas today we really have the ambition to make it concrete, saying: it's a real risk for us, it's a risk for the customer” (Operational Manager, Serviceo)

Regulation. Distributed attention occurred through regulatory practices: risk becomes a principle that redistributes resources, guiding decision-making, distributing risk roles, and triggering actions to address risk. Actors relied on risk as a medium to regulate its operation. This regulation can relate to several aspects (roles, rules, knowledge). However, this requires an integration effort, which is not necessarily natural, especially when there is no external regulation that requires it:

> “To say: it is you who are in charge, not to remove the risk, but to drive the action plan that can reduce or cope, it is very empowering. The obligation to have a quantified objective is sometimes experienced as heavy, but it still requires to deal with it.” (Top Manager, Serviceo)

Risk assimilation

The last mode of risk framing concerns emergent processes, in which organizations build risk as an attentional structure. This logic encompasses 17 of the 36 strategic processes of our sample. In risk assimilation, attentional mechanisms followed an emergent logic.

Signage. Selective attention occurred through signage practices, risk is part of the day-to-day landscape of the organization's stakeholders. Actors are guided by management systems, in which risk is embodied. The presence of these devices, which can be tools, procedures or people responsible for raising awareness of risk, then directs the attention of managers. These are guided more or less consciously by the rules, methods and procedures arising from the risks. Through signage, the risk, as a structure, frames the way of selecting the objects of attention: it predetermines in part the future identified risks. We have emphasized that this signage does not always produce the expected effects: it depends on the way in which the actors take ownership of the risk management.

> “The tools [of risk management] are absolutely necessary because they draw a road, which is a road called quotation marks of excellence, finally, an optimized route to allow everyone within the bank to stay in the nails . If you follow these procedures and follow these tools conscientiously, you will, and normally you should not have big problems and so you are on a well-lined road, framed that allows you to move forward.” (Operational Manager, Banko)

Capitalization. Engaged attention occurred through practices of capitalization: actors enrich the repertoires of rules, procedures and knowledge about risk. These repertories can be tangible or intangible. This ability to change risk repertories, however, depends on actors’ willingness to engage in this task, the existence of mechanisms to capitalize, and the ability to talk about risk on a daily basis, as a good practice rather than as a taboo subject:

> "For example, Spain is a step ahead of some good practices in the industrial field, where the goal is to capitalize on it, to show everyone, and say: well we can perhaps think to something coordinated, so that everyone advances at the same place. » (Risk Manager, Industrilus)

Rearrangement. Distributed attention occurred through the practices of rearrangement, the risk as a structure is appropriate by the actors, who adapt more or less consciously their behaviors. Actors arrange their resources (time, effort) according to the directions dictated by the risk structures, or on the contrary by moving away from them (consciously or not). These practices can lead to continuous improvements, or vice versa:

> "Risk management procedure, here it is, it comes down to a double-sided page, with a logigram, description of the procedure, managers and reference documents [...]. Of course, I kept all the documents [...], adapted them to our operation, modified some things ..." (Risk Manager, EnvirOrg)

3.2. AN ATTENTIONAL CYCLE

Our data suggest that each mode of risk framing constitutes a successive stage. Although we do not provide enough data to demonstrate this point, we describe the "clues" in our data that suggest those relations between the different modes of risk framing.

First, once captured, risk seems to move to the stage of revelation: for example, at BigBank, topics identified by managers as important are forwarded to risk managers. Risk managers indicate that they rely on the watch conducted in the different directions of BigBank, in order to feed the process of risk mapping. At Indugiga, the transition between capture and revelation is done through strategic forums, in which the various directors discuss topics that have emerged recently. As the risk manager is part of these executive bodies, he can capture these elements and integrate them into formalized risk analysis. In the case of Industory, we note the following point of passage: the risk identified by the operational director (processes P3), was subsequently added to the regional risk mapping (processes P1).

There are also traces of the passage from "revealed" risk to "embedded" risk, for example at BigBank: the risks identified in the map are translated into indicators, which are then piloted. This management is not always compulsory, but risk managers work to incorporate the monitoring of risks (especially operational) at the different managerial levels. In the case of Indugiga, we find another way of passing the risk revealed to the incorporated risk: the risk mapping, which we have described the elaboration in the process P1, is mentioned several times in the description of the process P2 as an "input" to strategic thinking, both at headquarters and in the regions. Finally, at EnvirOrg, we see the impact of the realization of the mapping described in process P1, when in the process P2, the operational director indicates that this changed the way of naming practices that he was already declining: some subjects were already piloted, but were not called "risks".

In addition, we also find risk crossing points "incorporated" into "assimilated" risk in certain processes. For example, at Admitop, headquarters-based tools and security procedures (process P1) are used by the operations manager to guide crisis management in the field, such as the offense in an agency. At Banko, the risk of fraud was assimilated by the operational director, who adapted some of the rules and procedures following a case of fraud among her teams (process P3): she reinforced the controls as prescribed by the headquarters (process P1). At Industrilus, we also note that some devices in the P2 process are assimilated and play a role in the P3 processes: they partially structure the weekly meetings of the operations manager, which included a regular review of the risks to his habits.

Finally, it seems that the assimilation of risk subsequently influences the capture of new risks. Passage points between assimilation and capture are indeed observed in some processes. At Ingénolux, the habits taken by the operational director to detect psychosocial risks lead him to leave his door open on a daily basis, and thus to be the point of interface between the managerial line and the problems reported by the teams. At Admitop, the usual way of apprehending the security risks was a surprise when the risk of intrusion materialized in another form than expected: the operational director did not imagine that an intrusion could happen in back-office sites, and did not necessarily have the necessary preventive measures in place on these sites. Finally, at Indugiga, the transition to risk is captured by the risk management devices, which "partly" constrain the daily life of one of the directors: very busy meeting the requirements of reporting and management (declined in the process P3), he estimates that he has less time for his more "relational" activities, by which he identifies commercial risks (e.g. customer dissatisfaction, changing needs), as described in the P2 process.

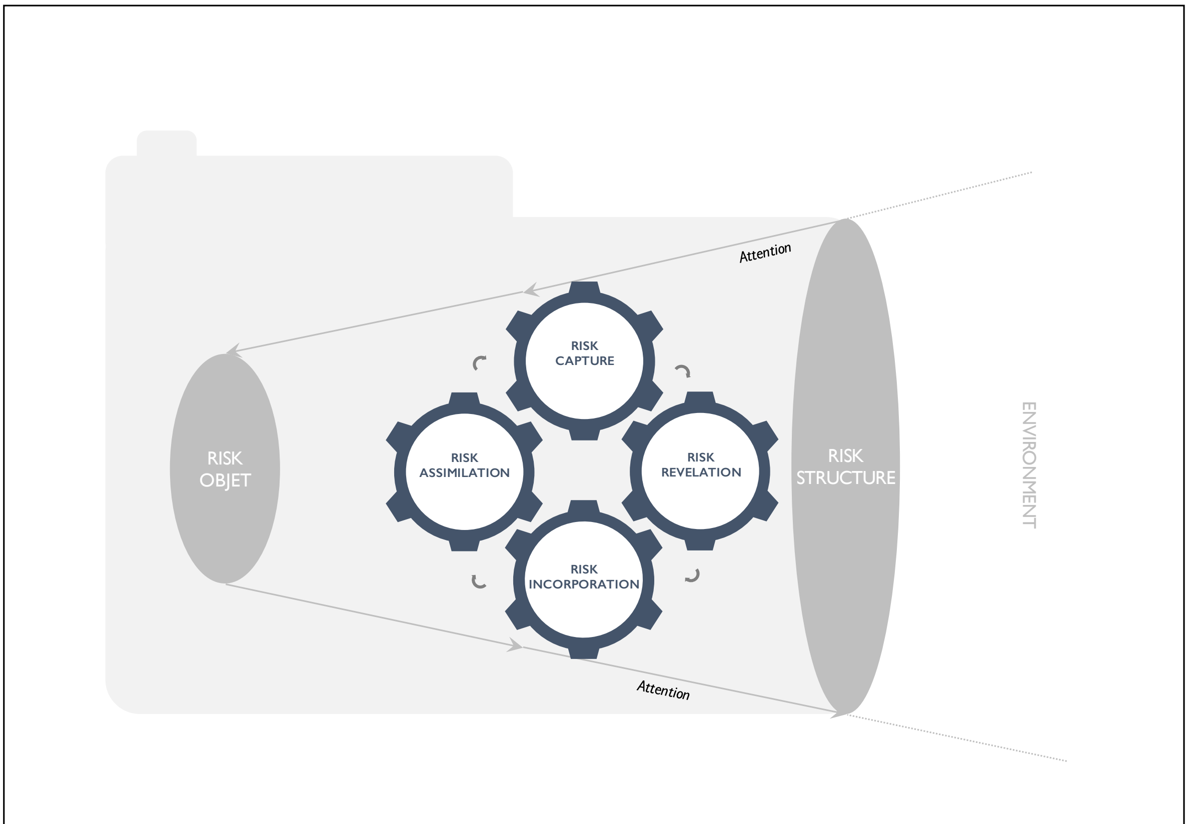
4. DISCUSSION AND CONCLUSION

By shedding light on the attentional mechanic of risk framing, this study provides several theoretical contributions. First, we present the contributions for risk literature (4.1) and for the literature on managerial attention (4.2). Then, we highlight the managerial contributions (4.3). We conclude by stressing out some limits and further research directions (4.4).

4.1. RISK FRAMING: “AN ART OF PHOTOGRAPHY”

This study aimed at enhancing understanding on risk as a contingent strategic concept, by highlighting the process through which strategists’ attention frame risk. Our findings revealed that risk framing occurs through a generic mechanic which can take four different logics, depending on the focus of the framing artefact (issue-oriented or structure-oriented) and the allocation of attention (emergent or deliberate): risk capture, risk revelation, risk incorporation and risk assimilation. Each logic involves different practices and leads to distinct frames of risk. From those results, we derive a model of risk framing This model is schematized by Figure 1, through a metaphor: we suggest that risk framing operates in the manner of an "art of photography". In that sense, risk constitutes an image of the environment (i.e. risk as an object), captured by the organization, which ultimately becomes the filter of the camera (i.e. risk as a structure), and in turn directs the future directions of photographing. Attention here plays the role of "a light beam" that reveals and draws the contours of risk, as framed in the organization.

FIGURE 1. Risk framing: an attentional model



4.2. THEORETICAL CONTRIBUTIONS

Our study has several implications for research. First, by highlighting the framing process underpinning risk, we contribute to the recent calls for a better understanding of risk as a social construct (Boholm & Corvellec, 2011; 2016). We offer a novel way to conceptualize risk, as a strategic frame constructed and mobilized by organizations. Specifically, we distinguish an "object" and an "structure" facet of risk, based on representations of risk provided by strategists in our study. This conceptualization of risk refines prior models of risk, which has mainly considered risk as an interpreted issue (Hilgartner, 1992). Considering risk as both issue and structure opens a path to further research to better understand how organizations define and address risks. It allows a reconciliation between absolute relativism (Douglas & Wildavsky, 1982, Jasanoff, 1998) and a predetermined definition, which can mask what actors actually designate behind the notion of risk.

Second, our results show that despite the growing repertoire of pre-established frames used by organizations (Mikes, 2012), risk seems to remain an "opaque concept" (Ocasio, 2005). Therefore, considering risk as a frame and studying risk framing opens a path to better understand the extent to which risk constitutes, among other organizational device, a way to deal with uncertainty (March and Simon; 1958). In this line, our research echoes with Scheytt et al. (2006), and more recently Maguire and Hardy (2016b) who suggest that risk is an increasingly diffused medium of interaction in organizations, and invite researchers to explore its implications. We show how risk can paradoxically become a common vocabulary to designate a set of elements and to coordinate action (Mikes, 2012), and in the meanwhile, generate ambiguities or esoteric practices.

Third, in line with recent calls, we provide a better understanding of the social processes of risk construction (Power, 2016). While prior literature recognizes the intrinsic link between risk and attention (Maguire & Hardy, 2013), the way in which this link is established in practice has been little addressed. Our results characterize this relationship more precisely, by distinguishing different modes of framing risk. We propose a set of dimensions (i.e. emergent versus deliberate attention; object-oriented versus structure oriented process), which provide an analytical lens to describe the day-to-day practices through risk acquire its meaning and representation within organizations. We highlight the attentional mechanisms of risk framing, which allows understanding risk does not only reflect calculative techniques but also an attentional trade-off which may be implicit. Those mechanisms enrich burgeoning works on the "codification" of risk and its "procedurization" (Demortain, 2016, Jorgensen & Jordan, 2016): they shed light on how risk evolve from a discourse (Maguire & Hardy, 2013) to a codified and formalized frame (Power, 2004b). We have shown that this transition from one to the other can strongly alter the meaning and representation of risk.

4.3. Implications for practice: lessons for envisioning risks

This study also has several practical implications. The first relies on the distinction of various ways of envisioning risks. As risk has become an unavoidable aspect of strategic decision-making, top and middle managers need to reflect on the methods and tools they used to identify and assess risks. Some lessons can be drawn on the ability of organizations to envision new or "unthinkable" risks: while constraint by limited resources, organizations may try to optimize the distribution of their attention. However, this "rational" logic may prevent managers from detecting new trends or emerging issues, focusing primarily on the risks. This as a critical aspect, since the more popular risk management devices, such as ERM, generally embody this rational logic. Therefore, our study invites ERM process to integrate and articulate other methods of framing, derived from strategic devices or innovative processes, which allow disruptive thoughts and give managers opportunities to think, once in a while, "out of the box".

Another practical implication concerns organizations that seek to develop prospective vision of their future risks. Our findings suggest that in order to identify "new" risks, organizations may not only develop the ability to reframe their environment, but also to generate consensus toward their managerial teams. As our findings suggests many practices of risk framing rely on collective attention: issues that are not collectively adopted may never acquire the official status of risk. Therefore, envisioning risk relies not only on managers' individual abilities, but also on the collective ability of organizations to coordinate, to share information and to build an aligned vision of the environment. Concretely, those observations invite organizations to promote cross-functions and cross-unit meetings, and to develop frameworks that helps providing and sharing a common representation of risk.

4.4. Limits and further research directions

This study carries some limitations. First, it mainly relies on interviews with few actors among each organization. Therefore, we may not have captured all aspects of the process of risk framing. Several aspects may have been overlooked. At the external level, external events and tendencies within an industry can make actors more sensible to specific issues. For example, selling "downwind" issues such as a risk of fraud or reputation after the Volkswagen scandal may be facilitated by this context. At the organizational level, risk framing is also embedded in informal structures such as political stakes, informal communication or day-to-day interactions (Jordan et al., 2013). Moreover, interviews are subject to possible bias of distortion or deformation. A further research direction could be to observe *in situ* a process of risk framing, in order to provide a longitudinal analysis. A longitudinal analysis could confirm or challenge the relation between the different modes of risk framing suggested in our cycle model, or reveal other forms of risk framing. To do so, other conceptual framework could be mobilized. In particular, we note a conceptual proximity between the four logics of risk framing and the four steps of organizational learning identified by Nonaka and Takeuchi (1995), which identify four mechanisms through which organization develop tacit and explicit knowledge. Risk seems to travel across organizations as knowledge travels through socializing, externalizing, combining and internalizing knowledge. This proximity could be further explored by considering risk as a form of organizational knowledge, and by unfolding the construction of risk as a learning process.

Furthermore, our model of risk framing needs further validation, by involving a larger variety of actors and contexts. Despite the variety of industry and ERM seniority, our study is based on relatively similar organizations in terms of size, structure and national culture, which can provide a context for different practices of risk framing. Our model of risk framing could thus be extended to other contexts, such as small and medium enterprises, with less and more implicit hierarchical levels, and less formalized processes.

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6. APPENDIXES

Appendix 1 – List of the framing processes

P1-BigBank	Risk assessment on projects based on tools defined by the operational risk department
P2-BigBank	Identification by the management team of a risk related to structural changes in the industry, and definition of strategic moves
P3-BigBank	Credit risk assessment by the operational director
P1-Spidity	Definition of a risk management approach in the company (de-compartmentalization of risk management)
P2-Spidity	Risk assessment for a project to launch new product in a foreign market
P3-Spidity	Monitoring of commercial risks in a regional direction
P1-Indugiga	Update of the company's risk map
P2-Indugiga	Progressive identification of a risk related to the loss of competitiveness of the company’s business model
P3-Indugiga	Adaptation of the methods of commercial risks assessment in a regional direction
P1-Industory	Mapping of the company’s major risks
P2-Industory	Establishment of a method to identify discrepant strategic risks
P3-Industory	Identification of a risk of alcoholism in a regional direction
P1-EnvirOrg	Realization of risk mapping (bottom-up and top-down approach)
P2-EnvirOrg	Establishment of a formal risk management process and risk owners
P3-EnvirOrg	Adaptation of the management modalities of regional commercial projects to integrate the risk of blockages during deployments
P1-Ingénolux	Mise à jour de la cartographie des risques de l’entreprise
P2-Ingénolux	Evolution of the methods of elaboration of the strategic plan inspired by the approach of risk management
P3-Ingénolux	Progressive identification of psychosocial risk in the company
P1-MobiliT	Routinization of the ERM process and integration with strategic processes
P2-MobiliT	Risk assessment on a project to settle in a foreign country
P3-MobiliT	Identification of a risk related to subcontracting
P1-Pharmatrix	Realization of a risk map of the company
P2-Pharmatrix	Risk assessment related to the launch of new projects
P3-Pharmatrix	Application and evolution of crisis management methods in the field
P1-Serviceo	Update of the company's risk mapping
P2-Serviceo	Identification of weak signals related to market transformation
P3-Serviceo	Monitoring the risks of non-compliance with the rules on the sites in a regional direction

Appendix 2 – Extracts of the database
Risk capture

Process	Verbatim (extract)	Attentional mechanism (justification)	Consequences on risk framing
P2-Admitop	*«We decode [what directors say]: 'if you do that, then you degrade the public service. If you do that, then you're saying that [we] are disengaging. If you do that, then you're saying in subtext that you're not dealing with people who are in trouble. And how do you treat someone who does not have an appointment but who comes with an emergency?' So these are the elements they show us [...] Because you're telling them that you're degrading their service, but that's what attaches them to Admitop. Or if you do not go far enough in one direction, then you do not give them sufficient resources. » (TM)*	Through interactions with his environment (*i.e.*, stakeholders), the manager selects a problem by "decoding" the discussions with the stakeholders. The risk enters into the organization's "scope" of attention through this manager.	At this stage, risk reflects the interpretation of a limited number of actors (*i.e.*, TM). This interpretation is influenced by other stakeholders, who send a message to the TM.
P2-BigBank	*« On the one hand, there are sales people who are in contact with the customers, and who therefore see a certain number of things that are happening. On the other hand, there are payment method specialists, who themselves see the new models develop, because ... once again, since these systems are not totally closed, they still need to look for interfaces. with the institutional system, so it's coming. » (TM)*	Top managers rely on channels (here sales people and specialists) who select for them information on the evolutions of the industry.	At this stage, risk takes the form of a flow of information reported to the TM, without being formulated as a risk.
P2-Indugiga	*« We have the same department in the direction of strategy, which [...] makes in 5 lines, a very small summary or extract of all the news that seem interesting. And so, even when I do not have time to read the press review, I read the titles, and then from time to time, like this: tac! It reminds me of something I saw the day before yesterday. [...] And then sometimes I find it and I say: 'of course, two different companies that five days away, in two different parts of the world, announce things quite similar". I say to myself: "there is something here!"» (TM)*	The organization relies on channels (*i.e.*, the strategy department) that select the objects of attention to be addressed by the general management). These objects of attention consist of a press review of a few lines.	Risk reflects the connection that an actor (*i.e.*, the CEO) has established between different objects of the environment, which seem to him to have points in common.
P3-Industory	*« And so I went to the site of INSEE, which has a very well-done website on alcoholism problems, I looked at the deaths of less than 65 years in France, and there are 3 recurrent regions [...] so I said to myself: 'Ah, finally there is perhaps something anyway!'» (OM)*	A manager selects an object of attention (*i.e.*, problems of alcoholism), which arises his interest and leads him to further investigation.	Risk is expressed through the curiosity that an actor feels towards information about an alternative, whose probability could be significant on its perimeter.
P3-Ingénolux	*« So we have a vision, and since we are on the ground permanently, we have a knowledge of the actors. And we have moments of sharing. And to say: well, I went to that place, I saw that » (OM)*	An actor of the organization (here the MM) selects an object of attention, which consists of an observed fact which will then be shared with others.	At this stage, risk refers to information, which derives from the experience of an actor on the field, shared with other members.
P3-MobiliT	*« We have a medical committee [...] We have doctors who look at the legislative environment and then, who also look at all the publications that exist on all the chemical elements that are present in the manufacture of [products] whether in the products or whatever in the machines we use.» (OM)*	Channels pre-oriented on defined topics (here the legislative environment) select information to share them (*e.g.*, on harmful products).	Risk is expressed through information on legislation that could impact the organization.
P2-Servicéo	*« Reporting itself is a review, the end result review, I have always been attentive to that, when there is a change that you do not understand, you must not let go. When there is an*	An manager scans and selects information that he perceives as salient	Risk is characterized by an inference made by an actor, who considers that

	evolution of a figure that you do not understand, it is ... there is a cause that you have not identified. So that I also think that it is part, in a way, there are some important developments, which will therefore generate risks or significant opportunities, today we talk about significant risks, which we will detect in slight variations in results. » (TM)	(*i.e.*, a figure he cannot understand).	an unexplained information reveals the existence of a potential risk.

(TM=Top Manager; OM=Operational Manager; RM=Risk Manager)

Risk revelation

Process	Verbatim (extract)	Attentional mechanism (justification)	Consequences on risk framing
P1-Industrilus	*« On this topic, we sent in April to the agents of Admitop, here is this leaflet…and then a message on the intranet, which will last, to do a sensitization action, this time for all the agents.» (RM)*	Risk drives distributed attention, as it leads to the deployment of resources across the organization (outreach)	Risk is expressed through advocacy materials, and translated in terms of potential consequences and behaviors to have or avoid.
P2-Banko	*«It's actually: either I launch a new product, or I start a new business in a new country or a new customer segment, or it's a new organization, or I decide to outsource, finally anything that could change a process that works, or maybe I change scale » (TM)*	The distributed attention is marked here by the fact that the evaluated risk contributes to define choices in the deployment of the organizational resources (outsourcing, etc.)	Risk is traced in the choices resulting from the analyzes (risks included) as part of a decision process.
P1-BigBank	*«[that leads] to choices, or in any case behind if we make choices, to settle on a flood zone, to say to myself: I have an interest in having a BCP (business plan continuity) that is solid, and therefore a BCP It's a BCP that costs a little more, so that's the extra cost.» (RM)*	Distributed attention refers to the formulation of implementation choices with regard to risk analysis, which directs the distribution of resources.	Risk is traced in the choices resulting from the analyzes, in terms of costs, and in the business continuity plans, in terms of scenarios and actions to be carried out.
P2-Spidity	*« So in each management committee, there is the agenda that is set in advance, we may decide to make a particular focus on such action plan of such risk… » (TM)*	Distribution of attention consists of defining the topics to be addressed in the management committees.	Risk is formalized by monitoring indicators presented during the committees and by action plans whose progress is monitored.
P1-Indugiga	*« Scenarios, risk factors, plans for dealing with these risks, and plans for dealing with these risks, we say to ourselves: it's good to have treatment plans, but one of the biggest problems is that is that often we have 150 actions, etc. It is already to prioritize, and especially behind, to say to oneself: these actions, are we implementing them or not?» (RM)*	Distributed attention mechanism consists of the prioritization of actions with regard to the risks as assessed in the risk mapping.	Risk is formalized by monitoring indicators, and action plans (risk reduction objects and resources allocated).
P1-Industory	*« We are asking for an action plan for all risks. So all the risks that the entities send us, we ask that there be a plan of action. So rather than talking about action plan, at first I prefer to talk about strategy. What is the strategy against a risk? We can very well say: we do nothing. It is perfectly legitimate as a strategy, provided that it is really something thought, decided. » (RM)*	Distributed attention mechanism consists of the definition of action plans, that is the allocation of specific resources directed towards the goal of dealing with risk.	Risk is expressed through a willingness to deal with risk or not, and a modality to do so (i.e., risk strategy).
P1-EnvirOrg	*« There may be new plans of action that will be implemented, we do not know, if there are other priority risks, and from there, I go back the information, I use the tools that I adapted and that will surely evolve according to what we want to do » (RM)*	Distributed attention mechanism consists of the definition of (probable) action plans, which evolve.	Risk reflects a quantity and direction of allocated effort and resources (i.e. action plans)

P2-MobiliT	*«That's how we prioritize the risks. So for example, the risk I mentioned, to have the right project planned, is the number one priority» (TM)*	Distributed attention mechanism consists of the prioritization of actions with respect to the assessed risk.	Risk reflects resource allocation and prioritization of topics of importance (ie prioritization)
P1-Pharmatrix	*« Since this valuation, which will certainly take the impact, but also the aspect frequency etc. or the aspect control, all these dimensions will be implemented to try to get out what should be in my opinion a list of 10 risks really priority for the group, to treat priority. Either to make an inventory of existing risk management means, to consider whether they are sufficient or not, and possibly to add additional measures of risk control » (RM)*	Distributed attention is characterized here by the prioritization of topics to be treated by the organization and a particular way of redeploying its resources (means of control, control).	Risk is expressed as valuation as a way of prioritizing stocks. The risk is translated into means of control and control.

(TM=Top Manager; OM=Operational Manager; RM=Risk Manager)

Risk incorporation

Process	Verbatim (extract)	Attentional mechanism (justification)	Consequences on risk framing
P1-Admitop	*« And then make a point where we would not update, but we would have a look at what was done, what was covered, and also there is already a little bit of training, in the positive sense or negatives of a particular risk. » (RM)*	Risk leads to a committed organizational attention, insofar as it is the subject of trainings where the time and efforts of the actors are mobilized on this theme.	Risk is represented and disseminated through the training provided by the risk managers (as messages disseminated to specific populations).
P2-Industrilus	*«There is this risk committee, which meets every 15 days or every 3 weeks, very regularly, and in which we see the offers, which correspond to these criteria. » (TM)*	Risk engages organizational attention through a regular and formal monitoring committee.	Risk is translated into working arrangements (temporality, analysis criteria, composition of decision-making bodies)
P1-Banko	*«There is a process that is fairly clearly identified, which is provided for in the banking regulation, which is what is called the process, and then I'm talking about operational risk, which is the validation process for new activities.» (RM)*	The committed attention mechanism is characterized by a process that forces stakeholders to consider risks with each new activity.	Risk is translated into "passage oblige" of any new activity, which will receive a specific attention to be evaluated.
P3-BigBank	*« [This is a point] that happens on a monthly basis and in which we bring in or out clients depending on the degree, finally depending on the risk is that considered legitimate or illegitimate on this client and so every month we get meet to look at each customer, see how it has evolved, decide what actions to take or not. » (OM)*	Organizational attention is engaged by a monthly analysis of some clients, framed by a risk analysis.	Risk is expressed by monthly rites where the directors look at specific aspects of the files.
P3-Spidity	*« Because we have, formally, a risk study that we scan twice a year, on a document we call the forward-looking schema, which serves as both a basis for risk assessment and projection on the future network.» (OM)*	Risk generates a committed attention to the extent that systematic regular formal analysis by the directors	Risk is represented through a formalized document that frames the analyzes carried out on the forward-looking regional plan.
P2-Industory	*« A review of the risks in parallel with the strategic review of the operating parties, and a permanent rotational review of risks by major risk groups, which takes place in the executive committee, if it is not every month, is a once every two months.» (TM)*	Risk gives rise to rites in which the attention of the executive committee is engaged (time and effort) on a regular	Risk is translated into strategic thinking mode, via risk families.

		basis	
P2-EnvirOrg	*« There was a first meeting it was for the validation of the documents as they were presented, and that was the only meeting, the second to be done after the start of the deployment. So for now it's on stand-by, in my opinion there will be none before the end of the year, since the deployment is scheduled for October » (RM)*	The validation of risk-related documents generates committed attention from senior management, but in a limited way.	Risk is formalized in documents defining the deployment of a structure (regional maps, correspondents, action plans).
P1-MobiliT	*« So I put in place the governance, we are integrated in the process of risk management and audit, and after the bottom layer we see is that we had a process, finally ... There There was an urgent need to synchronize this process with the strategic plan process.» (RM)*	Risk structures strategic processes for the management team by synchronizing ERM with strategic processes.	Risk reflects a specific way of articulating organizational processes (i.e. synchronization modality).
P3-Servicéo	*« And now it's [follow-up action plans of risks] anchored in our habits, since it's been so long that we work like that, we ask more the question ...» (OM)*	Risk, through its action plans, generates working hours inscribed in terms of duration and habits.	Risk is a daily habit of following the progress of action plans.

(TM=Top Manager; OM=Operational Manager; RM=Risk Manager)

Risk assimilation

Process	Verbatim (extract)	Attentional mechanism (justification)	Consequences on risk framing
P3-Admitop	*«And afterwards we draw the consequences. There are immediate actions that have been taken, that is to say, beyond the people who have been received and accompanied, immediate actions have been taken, of the type: access protection, and there is a reflection, a reflection that has been made and that has resulted in a development and a change of routine or the reception of people. » (OM)*	Attention is reflected in reflections dedicated to changing structures, in this case here to change the risk management procedures for intrusion on sites, following the materialization of risk.	The modes of representation and the rules related to risk evolve to integrate the experience that the actors lived of the risk (once materialized).
P3-Banko	*« The first reaction is surprise. Then it's trying to understand. [...] There is always a system of interrogation to be able to verify what happened, and after analyzing all the elements of the situation, and to know: is it the collaborator is at fault? » (OM)*	Attention is reflected on the specific efforts made to understand the materialized risk, and on the evolution of the structures (mental and formal) that reflect it, including the rules and procedures for managing the risk of fraud, following a case found).	Actors' perception of risk is enriched by the experiment: in this case, the MM was surprised because its perception of the risk as formalized was different from what it lived at the moment when it has occurred.
P3-EnvirOrg	*« This is the accumulation of difficulties encountered in recent years. We were faced with prohibitions of [...] and the idea is to go together with the [stakeholders] to make the project work. We did not mobilize everything that could be mobilized, so we have a strong stake to further mobilize these resources. » (OM)*	Organizational attention is engaged to the extent that actors allocate reflexive efforts to make sense of a risk whose manifestation differs from the way in which it is formally represented in the organization.	Risk is reflected in a discrepancy between its formal representation and the experimentation of the actors. This shift leads to an adjustment of its formal representation, in this case its translation into the management of commercial projects (allocation of resources upstream of the project to

			better anticipate risk).
P3-Indugiga	*« So that led to a work of consultation a little unpublished, everything was open, and this resulted in a fairly complete overhaul of our annual reports, in which we report on our activity. » (OM)*	Attention involved here translates into the efforts made to redefine the modality of taking into account the risk (here better capture and integrate the feedback of the customers in the commercial approach (consultation).	Risk evolves through the overhaul of the modalities of its consideration in the daily practices of the actors (here the MM).
P3-Industrilus	*« It is by thinking from the specifics of a small compared to a big, it is to do the engineering judgement, from studies, customer contacts, analysis of facts, also some experience, so to have in mind also the story, what has happened in time, how things have evolved » (OM)*	The organization devotes a lot of attention to the extent that reflections are made to change the structure (here the modalities for taking into account the commercial risk).	Risk as a structure evolves through a reengineering of business risk analysis methods.
P2-Ingénolux	*«But we have chosen to go instead to the niche of consultation and support rather than rigor. We have an experimentation of the deployment, with pilots. Because we anticipated and worked well with the public concerned, we communicated. » (OM)*	The organization devotes a dedicated attention to the extent that it dedicates specific efforts and resources to change its structure (here the modalities of strategic thinking)	Risk is expressed by new ways of working on risks (and on strategic thinking more broadly).

(TM=Top Manager; OM=Operational Manager; RM=Risk Manager)