From an "either/or" towards a "both/and" response to paradoxes: a two-step stratification process model

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Résumé :

Complexity, changes and resources scarcity are pervasive elements of today's organizational life. Research on paradoxes have shown that such contexts are ripe for the experience of contradictions, inconsistencies or ambiguities. Managers are thus more and more confronted to paradoxical situations where they have to simultaneously deal with two contradictory and interrelated elements. Paradoxes are thus embedded in the everyday actions and decisions of managers and the way they navigate these paradoxes have an impact on organization's success and sometimes survival.

Literature on paradoxes shows that to pretend to long term survival, organizations need to adopt proactive responses, which involves a capacity to identify and to embrace contradictory demands. However, research offers scant insight into practices elaborated by managers to be able to embrace tensions in turbulent contexts of important changes and limited resources. Our study is an attempt to fill this gap addressing the following question: *when confronted to situations of much turbulence and resource scarcity, how managers can proactively navigate paradoxes and thus pretend to long term survival?* More specifically we are interested in the process and the practices that allow managers to evolve toward a "both/and" rather than an "either/or" response to paradoxical tensions.

To provide relevant insights, we rely on a deep case study of IBM Montpellier, a French local entity of IBM that has been confronted, in the early 90's, to various decisions of top management that diverged from its local interests and even threatened its survival. By studying this specific period of tensions, where local interests and global expectations sometimes seem

incompatible, we aim at highlighting how local actors finally managed to recognize and embrace those tensions over time.

This article develops an empirically grounded process model that shows how local managers' response to paradoxes evolve overs time: a first defensive step where local managers struggled with suddenly salient paradoxical tensions and respond by splitting tension to finally obtain a reprieve. They thus gain the necessary slack to evolve toward a second proactive step where they are now able to recognize tensions, to embrace them and to finally gain a more long-term survival.

The present paper contributes to the paradox's literature in various way. We first show that contrary to what the current literature asserts, defensive approaches are not systematically opposed to proactive ones. They may instead be complementary and even represent a first necessary step in a more global "stratification process" of learning to live and work with paradoxical tensions.

Finally, this study also contributes to works on paradoxical cognition since it confirms that recognizing tensions is a first necessary step towards proactive approaches. However, this study goes further since it shows how this cognition may be acquired over time, as a learning heritage of a prior defensive experience of paradoxical tensions.

Mots-clés : middle managers, processual approach, paradoxes theory, Multinational, restructurings

From an "either/or" towards a "both/and" response to paradoxes: a two-step stratification process model

INTRODUCTION

Complexity, changes and resources scarcity are pervasive elements of today's organizational life. Research on paradoxes has shown that such contexts are ripe for the experience of contradictions, inconsistencies or ambiguities (Lewis, 2000; Tuckermann, 2018; Van de Ven & Poole, 1988). Managers are thus more and more confronted to paradoxical situations where they have to simultaneously deal with two contradictory and interrelated elements (Lüscher & Lewis, 2008). Paradoxes are thus embedded in the everyday actions and decisions of managers and the way they navigate these tensions have an impact on organization's success and sometimes survival (P. A. Jarzabkowski & Lê, 2017). Literature on paradoxes asserts that to pretend to long-term survival, organizations need to adopt proactive responses, which consist in embracing, working and living with paradoxical tensions (P. Jarzabkowski et al., 2013; Lüscher & Lewis, 2008; Van de Ven & Poole, 1988). Prior researches highlight that being able to adopt such both/and approaches requires individuals capacity to think paradoxically, to recognize and accept complexity and contradictions (W. K. Smith & Lewis, 2011; W. K. Smith & Tushman, 2005). However, research on paradoxes offers scant insight into how managers develop this ability to recognize and embrace tensions and especially when they are confronted to turbulent contexts of change and resource scarcity (Tuckermann, 2018). Our study is an attempt to fill this gap addressing the following question: *when confronted to situations of much turbulence and resource scarcity, how managers can proactively navigate paradoxes and thus pretend to long-term survival?* More specifically we are interested in the process and the practices that allow managers to evolve toward a "both/and" rather than an "either/or" response to paradoxical tensions. To provide relevant insights, we rely on a deep case study of IBM Montpellier, a French local entity of IBM that has been confronted, in the early 90's, to various decisions of top management that diverged from its local interests and even threatened its survival. By studying this specific period of tensions, where local interests and global

expectations sometimes seem incompatible, we aim at highlighting how local managers finally managed to recognize and embrace those tensions over time. In this study, we address the micro-level foundations of paradox theory by focusing on how managers respond to paradox in their practices. This article develops an empirically grounded process model that shows how local managers' response to paradoxes evolve over time: a first defensive step where local managers struggled with latent tensions becoming salient, by splitting tension to finally obtain a reprieve. They thus gain the necessary slack to evolve toward a second proactive step where they are now able to recognize tensions, to embrace them and to finally gain a more long-term survival. The present paper contributes to the paradox's literature in various way. We first show that contrary to what the current literature asserts, defensive approaches are not systematically opposed to proactive ones. They may instead be complementary and even represent a first necessary step in a more global "stratification process" of learning to live and work with paradoxical tensions. In doing so, we propose a two-step stratification process model demonstrating how to managers achieve such an inclusive approach. Finally, this study also contributes to works on paradoxical cognition since it confirms that recognizing tensions is a first necessary step towards proactive approaches. However, this study goes further since it shows how this cognition may be acquired over time, as a learning heritage of a prior defensive experience of paradoxical tensions.

The paper is structured as follows. In the first part, we present the paradox theory, then we shade light on paradoxical cognition. The following section presents the empirical context of our research and its methodology, before laying out and discussing our main results on the way local managers navigate through paradoxical tensions.

THEORETICAL BACKGROUND

NAVIGATING PARADOXICAL TENSIONS: A PERVASIVE ELEMENT OF MANAGER'S EVERYDAY LIFE

Prior research have shown that changing and complex environments contribute to surfacing contradictions, incoherence and ambiguity (Lewis, 2000; Van de Ven & Poole, 1988). Such contexts are pervasive elements of today's organizational life, making them inherently paradoxical (P. Jarzabkowski et al., 2013; W. K. Smith et al., 2017). A paradox is identified when elements (i.e.: demands, emotions, ideas) seem logical in isolation but irrational and rather incompatible when they appear simultaneously, with each element reinforcing or dampening the other (Lewis, 2000). As critical agents of change and reframing, managers are often at the interplay between interrelated and conflicting demands (Cuganesan, 2017) and have

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no choice but to cope with paradoxical tensions. A large body of literature thus focuses on the kind of responses that such tensions may elicit and uses to oppose defensive vs active responses (P. Jarzabkowski et al., 2013; W. K. Smith & Lewis, 2011). Defensive responses are defined with a short-term perspective as they enable managers to only temporarily cope with tensions (P. Jarzabkowski et al., 2013). Such responses include for example splitting tensions (Poole & Van de Ven, 1989) which results in separating the two poles of the tensions and avoid interaction. Separation of polarities might be spatial or temporal. Differentiation over time, also called sequential practice (Perret & Josserand, 2003) consists in choosing one side of the tension in a first time and then switching to the other one. Spatial differentiation consists in splitting polarities into different organizational or hierarchical levels. Such resolution strategies ensure an iterative attention to both alternatives and may consequently drive short-term success. However, defensive responses can also lead to missing opportunities or to vicious cycles (W. K. Smith & Lewis, 2011; Tripsas & Gavetti, 2000). In contrast, active responses may drive longer-term success. Such responses include for instance acceptance (Poole & Van de Ven, 1989; W. K. Smith & Tushman, 2005) or transcendence (Bednarek et al., 2017; Seo et al., 2004). Accepting paradoxes means understanding contradiction, considering tensions as part of the everyday work conditions. It results in embracing tensions and "accept the paradox and learn to live with it" (Poole & Van de Ven, 1989, p. 566). Transcendence includes both poles in a dynamic where they are complementary and interwoven rather than competing (Bednarek et al., 2017; P. Jarzabkowski et al., 2013). Actors not only accept to live with tensions but they use their intricacies to transcend paradox and to build new alternatives (Lewis, 2000; Seo et al., 2004). Such proactive responses to paradoxical tensions "permit an organization to move on and live with the paradox" (P. Jarzabkowski et al., 2013, p. 246). To ensure long-term success, theories on paradoxes thus call for moving from defensive towards proactive responses to tensions, to enable change and adopt a "both/and" rather than an "either/or" approach (Lüscher & Lewis, 2008; Poole & Van de Ven, 1989; W. K. Smith et al., 2017; Van de Ven & Poole, 1988)

PROACTIVELY NAVIGATING PARADOXES: A NEED OF PARADOXICAL COGNITION

Previous studies proposed models to deal with paradoxes in organizational settings by coping with salient paradoxes (P. Jarzabkowski et al., 2013; Jay, 2013; Lüscher & Lewis, 2008; W. K. Smith & Lewis, 2011). All these models consider paradoxes latency as a condition for paradoxes' navigation (Tuckermann, 2018). It means that before being accepted or resolved,

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latent paradoxes had to become salient to organizational actors. Prior studies have thus focused on conditions that may trigger saliency (E. Knight & Paroutis, 2017; Miron-Spektor et al., 2017; Schad & Smith, 2018). These studies explain that environmental factors such as change, resource scarcity and plurality participate in paradoxes saliency but that it also requires paradoxical cognition (Miron-Spektor et al., 2017; W. K. Smith & Lewis, 2011). It means an ability of actors to think paradoxically, to recognize and accept complexity and contradictions (W. K. Smith & Tushman, 2005). According to Smith and Lewis (2011, p. 385), "living with paradox implies that actors shift their expectations for rationality and linearity to accept paradoxes as persistent and unsolvable puzzles". Cognitive acceptance thus permit a response where the paradox remains open in a "and" logic (Clegg et al., 2002; Lüscher & Lewis, 2008). According to Hargrave and Van de Ven (2017, p. 323) "paradox research has emphasized that the cognitive ability to accept the coexistence of contradictory elements sets the stage for using the tension between these elements as an opportunity for creativity". Smith and Tushman (2005) finally argue that manager's paradoxical cognition influence whether managers adopt defensive or proactive responses. Managers that are unable to recognize and to juxtapose inconsistencies are likely to by paralyzed and to struggle with paradoxes. By contrast, managers that develop cognitive acceptance are more likely to proactively navigate tensions, to benefit from them and to consequently drive longer success to their organizations. However, research on paradoxes offers scant insight into how managers develop this ability to embrace tensions and especially when they are confronted to turbulent contexts of change and resource scarcity (Tuckermann, 2018). Our study is thus an attempt to fill this gap by providing empirical evidences of how managers achieve cognitive acceptance and proactively navigate paradoxes in turbulent contexts.

RESEARCH METHODS

CASE SETTING

The setting for our study is an IBM local entity, established since 1965 in Montpellier, a city located in South of France. During its first twenty-five years, IBM Montpellier was the unique manufacturing site of mainframes for the whole EMEA (Europe, Middle East and Africa) zone. It had a stable and recognized position within the multinational and achieved a rapid growth in terms of headcounts and infrastructures (more than 3000 employees in 1985 and more than 100,000 m^2 of buildings over 20 hectares of land reserve). After many years of growth, the early 1990s marked an important turning-point for IBM: in three years, its net profits fell down over 200%, headcounts were reduced of 20% and the company announced more than $ 8 billions of

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losses in 1993. To overcome this critical period, a new chief executive officer was appointed, Lou Gerstner. After a period of observation and analyse, the new CEO decided to initiate profound strategic, technological and organizational changes. These transformations will profoundly reorganize the company and notably reconsider the roles, responsibilities and even the presence of some manufacturing sites. Between 1992 and 1996 the French subsidiary had to carry out heavy restructurings and faced a headquarter's decision to stop producing mainframes in Montpellier. While the site seemed condemned, local actors finally managed to maintain production activity in Montpellier. In 1996, the site even became the only European site in charge of producing IBM CMOS (Complementary Metal-Oxyde-Semiconductor) mainframes for the whole EMEA market. We chose to focus on this specific case and on this specific period that extends from 1993 to 1996 for three main reasons. First because during this episode, the French site went through a context of heavy restructurings and faced closure threats. Such contexts are known as ripe for experiencing contradictions or ambiguities and thus offer good opportunities to observe paradoxes (Beech et al., 2004; P. Jarzabkowski et al., 2013; Lüscher & Lewis, 2008). We thus chose this specific case settings because it seemed inclined to provide rich information on tensions that emerged in turbulent situations and on how managers react. Second, we focus on this case study because we already know the end of the story; we know that they finally managed to survive such tensions. We thus thought that this case might provide interesting insights on how managers cope with such tensions to achieve organization's survival. Third, we chose this case because the first author has conducted research during three years in immersion on this IBM French site, providing an easier access to data and above all a solid basis of trust, which is vital for this king of study. Indeed, as highlighted by Lüscher (2008), such investigations present research challenges, in part because they require exceptionally intimate, collaborative and highly interactive methods (Balogun & Johnson, 2004; Lüscher & Lewis, 2008). That's why case studies on the process of paradox management remain relatively rare, despite the importance and the need for empirical insights on these topics.

METHODOLOGY

In this article, our point is to explore the dynamic process through which managers may recognize them and cope with them. In line with Jarzabkowski and Lê we believe that dealing with paradox is "an iterative and dynamic process that actors negotiate as they experience

situations as paradoxical, often shifting from one response to another" (2017, p. 436). One objective of our methodology is thus to adopt a process-based perspective and to focus on how paradoxes and responses evolve over time (P. A. Jarzabkowski & Lê, 2017). Furthermore we assume that paradoxes are experienced by managers in their everyday tasks and activities (Jarzabkowski & Lê, 2017; Jarzabkowski, Lê, & Ven, 2013). Responses to paradoxes are thus constructed within individual's actions and interactions. In sum, our methodology consists into deeply exploring a rich single case study over time in order to extract abundant and informative data. The aim is to surface the process as well as the practices that allowed local managers to cope with inconsistencies and uncertainty of such changing periods and finally achieve organization's survival. To achieve such objectives, we chose to conduct a qualitative, inductive, single field study, using grounded approaches (Corbin & Strauss, 2008; Gioia et al., 2013; Gioia & Pitre, 1990). Such approaches offer promise for the exploration of complex and dynamic social phenomena (Suddaby, 2006). They allow to anchor analysis in the empirical data, to progressively and iteratively bring out concepts and more abstract categories and to finally develop a grounded theoretical model about complex and dynamic processes. (Glaser & Strauss, 1967).

DATA COLLECTION

This study is based on data collected between 2009 and 2013, as part of a research that focused on a more general historical study on practices elaborated by local manager in order to survive and maintain their local entity within the multinational corporation (MNC) between 1965 and 2013. During this research, in immersion on the French IBM site, 53 in-depth interviews were conducted and each one was recorded. Interviews were semi-structured, generally 1,5 hours long and discussions was focused on global and local contexts, on key events, decisions, strategies and practices elaborated locally to respond to headquarter's directives and expectations. For the purpose of this specific study, we selected 47 interviews among the 53 available since 6 of them were conducted with participants that joined the subsidiary after the period of restructuring under study. Data sample represents a total of almost 78 hours of interview with 36 different local actors and 292 pages of interview transcript. In line with the "as practice" approaches (P. Jarzabkowski, 2003; Whittington, 1996), we consider that strategizing is a "socially accomplished activity" (P. Jarzabkowski et al., 2007, p. 7) which practices are not limited to top management or to those whose function consists in developing
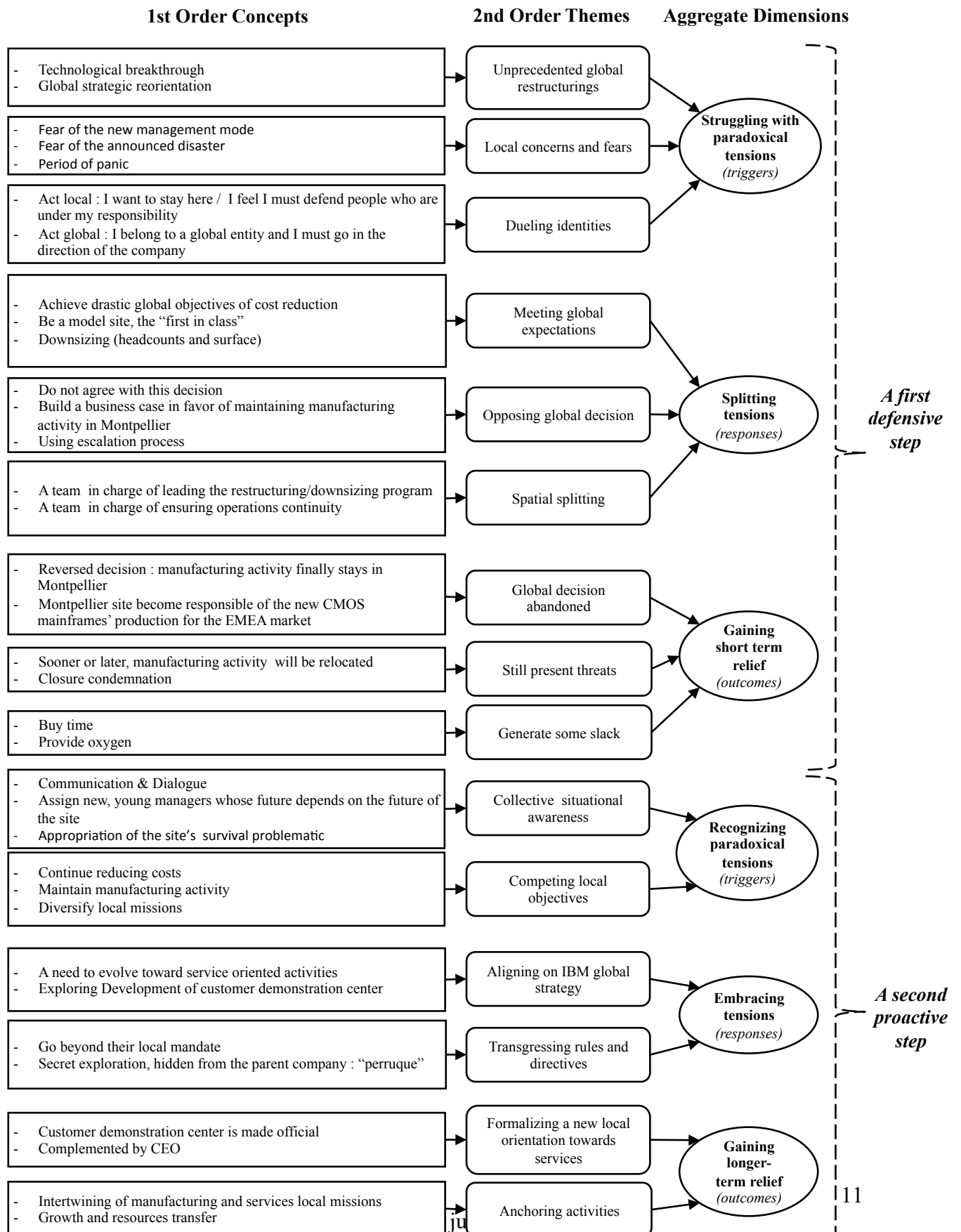
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strategies (Whittington, 2006). We thus focused our study not only on work and practices of site directors (5 interviews) but also on those of middle managers (heads of departments and heads of services, (23 interviews) as well as project managers (7 interviews), local employees (9 interviews) and union representatives (3 interviews). We also relied on to abundant secondary data (Yin, 1989) such as archives from the company, annual reports, biographies (Gerstner, 2002; Vernay & Barazer, 1988; Watson, 2003) and newspaper articles. The triangulation between formal interviews, informal conversations and secondary data allowed us to crosscheck and to complete the data collected, to strengthen the validity of our study and to address the fact that the study occurred 20 years after the events discussed.

DATA ANALYSIS

Data analysis was an iterative process, as we read over data transcript, we also inductively analysed it using techniques of constant comparison (Glaser & Strauss, 1967) to identify and enrich emergent concepts and categories as they arose. The aim of data analysis was to get insight on contexts, on paradoxical tensions and on practices elaborated by local managers to deal with paradoxes that emerged during the period of crisis and restructuring. We consider that people who lived the situation under study are "knowledgeable agents" (Gioia et al., 2012). Our aim is thus to give voice to informants and to focus on their descriptions and perceptions of past events without seeking to transcribe an objective picture of what really happened. We thus chose to follow recommendations of grounded methodologies (Corbin et Strauss, 1990; Gioia et al., 2012) and to stay really close to informant's voice in the early stages of data analysis and then progressively and iteratively gain abstraction to finally present a grounded model of their sensemaking. A model that allow to transcribe participant's experience in theoretical terms. We began the analysis by assigning "open" codes to stay as close as possible to informants' terms and to keep a distance from our own experience and assumptions. (similar to 1rst order analysis (Gioia, 2012) or to open coding (Corbin et Strauss ,1990)). We then went through the many emergent labels several times, seeking similarities and differences that allow us to regroup them in categories and to provide a more abstract level of representation (similar to Corbin and Strauss (1990) notion of axial coding). We then entered in the theoretical realm: for each emergent category, we ask whether prior theories, prior concepts might help us to understand or to explain what informants are describing (second order analysis (Gioia et al, 2012). Throughout the data analysis, we reviewed relevant literature in order to find out if existing

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theoretical concepts can help us explain our emergent categories. The final step consisted in contextualizing the observed process and in designing the emergent grounded model. It consisted into seeking relationships between our different concepts (selective coding). For each category identified, we analysed its context (triggers); the response of local actors to this event (practices) and how it impacted the observed phenomenon (consequences) (Corbin & Strauss, 2008). Results of data analysis process are synthetized in **Erreur ! Source du renvoi introuvable.**. Explanations and details will be given in the finding section.

Figure 1 - Data Structure

1st Order Concepts	2nd Order Themes	Aggregate Dimensions

- Technological breakthrough
- Global strategic reorientation

→ Unprecedented global restructurings

- Fear of the new management mode
- Fear of the announced disaster
- Period of panic

→ Local concerns and fears

- Act local : I want to stay here / I feel I must defend people who are under my responsibility
- Act global : I belong to a global entity and I must go in the direction of the company

→ Dueling identities

Struggling with paradoxical tensions *(triggers)*

- Achieve drastic global objectives of cost reduction
- Be a model site, the "first in class"
- Downsizing (headcounts and surface)

→ Meeting global expectations

- Do not agree with this decision
- Build a business case in favor of maintaining manufacturing activity in Montpellier
- Using escalation process

→ Opposing global decision

- A team in charge of leading the restructuring/downsizing program
- A team in charge of ensuring operations continuity

→ Spatial splitting

Splitting tensions *(responses)*

- Reversed decision : manufacturing activity finally stays in Montpellier
- Montpellier site become responsible of the new CMOS mainframes' production for the EMEA market

→ Global decision abandoned

- Sooner or later, manufacturing activity will be relocated
- Closure condemnation

→ Still present threats

- Buy time
- Provide oxygen

→ Generate some slack

Gaining short term relief *(outcomes)*

A first defensive step

- Communication & Dialogue
- Assign new, young managers whose future depends on the future of the site
- Appropriation of the site's survival problematic

→ Collective situational awareness

- Continue reducing costs
- Maintain manufacturing activity
- Diversify local missions

→ Competing local objectives

Recognizing paradoxical tensions *(triggers)*

- A need to evolve toward service oriented activities
- Exploring Development of customer demonstration center

→ Aligning on IBM global strategy

- Go beyond their local mandate
- Secret exploration, hidden from the parent company : "perruque"

→ Transgressing rules and directives

Embracing tensions *(responses)*

A second proactive step

- Customer demonstration center is made official
- Complemented by CEO

→ Formalizing a new local orientation towards services

- Intertwining of manufacturing and services local missions
- Growth and resources transfer

→ Anchoring activities

Gaining longer-term relief *(outcomes)*

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FINDINGS

Before analysing and discussing data collected, we'll present findings in a historical and chronological way in order to stay close to data and trying to best describe the context, the micro-practices developed by local managers as well as their consequences.

EARLY 90's: LOCAL MANAGERS STRUGGLING WITH PARADOXICAL TENSIONS

"What happened to us is relatively common. It's like the public deficit: nobody pays attention, nobody cares and suddenly, an event highlights it and what was considered as a diffuse threat becomes a vital threat. There is a moment when the threat becomes palpable and I think that this is what really triggers reactions. But it often requires a triggering event." (SITE DIRECTOR 1)

Unprecedented global changes and emergence of local fear and concerns

After many years of growth and stability, the early 1990s marked an important turning point for IBM. In the words of the former site director quoted above, this turning point can be considered as a "triggering event" for IBM Montpellier, an event that entailed a vital threat for the French site. The IT market was moving, competition was raising, and sales of mainframes continued to decline. Between 1990 and 1993, IBM's profits fell by more than 200% and in 1993 the company announced more than $ 8 billions of losses (archives data). To cope with this crisis, a new chief executive officer is appointed, Lou Gerstner. His arrival at the head of IBM caused unprecedented changes since it questioned IBM's missions, organization, technologies and governance. The new CEO decided to simultaneously fight two battles: one that consisted in reorganizing, restructuring and reducing the expenses of the company and another one, which consisted in upgrading IBM from a simple hardware manufacturer to a service company, delivering customers' solutions.

From the perspective of IBM Montpellier managers, these unprecedented global restructurings generated fears and concerns. An apprehension of failing to meet the new leader's strategic and technological expectations and a fear that these changes will result in significant local restructurings.

A duelling identity

Data collected also revealed that this period of sudden and important changes surfaced contradictions regarding local managers' identity. The coding and analysis of interviews conducted finally lead us to notice a latent contradiction regarding the position of local

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management: a tension between their double affiliation to the global (the company) on one hand and to the local (the site) on the other hand.

> "We have always respected the global rules fixed by IBM. [...] We belong to the global entity and we have to follow the same direction" (HEAD OF DEPARTMENT 5)

Informants explain that since its creation, the site has always been managed by directors who were strongly attached to the values and the culture of IBM. As explain a former plant manager, they had always been concerned with the perfect execution of their local mandate:

> "Our mission was to make production and our concern was to perform this mission well. There was a deep attachment to the company and a very strong culture of customer satisfaction and respect for commitments" (HEAD OF DEPARTMENT 2)

Data analysis thus clearly points a local managers' tendency to "act global", as a strong sense of belonging to the global corporation and a common willingness of commitment.

In parallel, we observed that these same actors also have a strong local embeddedness and an important local culture. We first noticed individual and geographical reasons for this local attachment. As a former plant manager explains:

> "People are strongly attached to the region and a large majority of employees and managers are absolutely hostile to the idea of having to leave Montpellier, whatever the opportunities elsewhere in the company" (HEAD OF SERVICE 4)

We also noted more social and collective reasons for this local anchorage. The former plant director explained for example that before becoming director, he spent more than 20 years on Montpellier site. As illustrated in the following interviews extracts, these years of common experiences have contributed to the emergence of a strong local cohesion and a real mission for local management: to protect people who were working there.

> "It is the alchemy of Montpellier. There is a huge local culture [...] So I think that at that time, if we fight so much to protect the site, it is above all to protect the people who were working there" (SITE DIRECTOR 1)

This dual identity is a latent tension for IBM Montpellier site's managers. In growing or stable contexts, they do not necessarily appear simultaneously or not necessarily enter in contradiction. However, when confronted to the sudden and important changes that occurred in the early 90s, this duality became a salient paradoxical tension since local managers simultaneously had to deal with contradictory global and local expectations: act global by accepting restructurings and downsizings AND act local by preserving local interest and jobs.

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Therefore, the scarcity of resources and organizational change reinforce such a tension and transforms this duality into a paradox as the two opposite poles becoming interdependent and reinforcing each other

1993 – 1995 - FIRST RESPONSE TO PARADOXICAL TENSIONS: SPATIAL AND TEMPORAL SPLITTING

Among the many changes engaged by the new CEO, one concerned an important technological change: the decision to abandon the bipolar technology, so far used for the high-end systems production and move towards the CMOS technology (Complementary Metal-Oxyde-Semiconductor). This new technology is more integrated, more energy efficient and less expensive than the previous one. This technological change had significant impacts on Montpellier site: its production tool became obsolete and its structure oversized considering the low need in place and resources of the new CMOS technology. During several consecutive years, Montpellier site's management thus received drastic objectives of cost reduction.

"At each beginning of the year, I used to assist the kick off meeting in the US. I took the objectives and came back to Montpellier. Every return made me sick because I thought we could not achieve these objectives; it was not possible; it was about 30% a year! Absolutely huge!" (SITE DIRECTOR 1)

Meeting global expectations …

The analysis of data collected highlighted that local management understood that the future of the site was compromised and that their only option to survive was to comply with the tight cost reduction objectives imposed by the headquarter.

"It is obvious for headquarter and for us that the manufacturing site of IBM Montpellier is condemned because of its disproportionate size and costs. If we want to survive, we have no other choice that operating drastic cutbacks" (SITE DIRECTOR 2)

The French local teams thus launched a major downsizing program. This program first consisted on headcount reduction: social plans were implemented including voluntary departures and early retirement. The workforce of the Montpellier site was therefore reduced by more than 50%, from 2,000 employees in 1994 to around 1,000 in 1996. The restructuring program also aim at reducing infrastructures and operating costs. Local managers, supported by national, regional and local authorities worked on transforming the site into an industrial park: the aim was to open the site to other companies by selling or leasing vacant buildings, to

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share operating and maintenance costs and propose employee transfers. Hence, in less than two years, the new industrial park attracted about twenty companies on the site, allowing IBM Montpellier to sell more than 4 hectares of buildings, to reduce its surface by more than 40%, and to transfer 2484 former IBM employees to these new entrants.

To achieve this restructuring while also maintaining production activity, local management split into two parts: one part was responsible of the restructuring program and the other one was in charge of operations management.

> "It was then a two-speed plant organization: one part of the plant was in charge of cost reduction [...] Another part was in charge of the more "technical" items and to keep running the business" (HEAD OF DEPARTMENT 2)

Between 1993 and 1996, local managers had thus achieved the industrial and economic objectives that were imposed by headquarter and thus appeared to adopt a rather compliant behaviour regarding global expectations.

> "We restructure the site, it has to work, we have to meet the objectives. Although we are forced to reduce the headcounts, the resources, the surfaces, we have to get production out anyway!" (SITE DIRECTOR 1)

…Then opposing global decision

Despite these considerable costs' reduction, in 1995, the plant manager received a fax from headquarter, announcing that the future CMOS mainframes wouldn't be produced in Montpellier. This global decision is perceived by local management as a condemnation to shut down and will trigger a strong opposition from the site manager.

> "If we are not in charge of producing the next systems, it means it's over. It means that we are just finishing the current systems and then we are shutting down the plant. This decision means the end for IBM Montpellier. I do not accept it." (SITE DIRECTOR 1)

The day after receiving the fax, the plant manager took the initiative of flying to the US to convince the world director of operations that keeping Montpellier in activity would be a better choice. He presented a business case, which supported the fact that it was profitable for IBM to maintain production in Montpellier, whether it is for transport and customs costs, or for local expertise.

> "He [the plant manager] had very impressive nerves: one day, he caught a flight to the US and requested an appointment with the worldwide director of manufacturing. He told him that

he disagreed with his decision of stopping the production in Montpellier and that he had a business case proving that it was profitable to continue to work in Montpellier. It is said that he entered by the window after being kicked out by the door." (PRACTIONNER 3)

1995: JUST A SHORT-TERM RELIEF

The French plant manager explained that when the decision was taken to stop manufacturing activity in Montpellier, its European and American top management were both convinced that Montpellier site was condemned. When he arrived in the office of the worldwide operations director, he was first told that he had to face and accept reality, which means accept that Montpellier site was not viable and that it will have to stop sooner or later.

However, the French site manager explained that when he fought to reverse this decision, he knew he was just fighting to "buy" some slack

"The objective was simply to maintain manufacturing activity for a little while in Montpellier. Gaining a little bit of oxygen, for a year or two, and then we'll see. […] We wanted to buy 2 or 3 years just to be able to show that it could work. We had ideas and projects for the future of the site and each year saved could thus change everything" (SITE DIRECTOR 1)

At the end of this tumultuous and unplanned appointment with the global operations leader, the local plant director finally managed to convince its top management to cancel the decision and Montpellier site then became responsible of the new CMOS mainframes' production for the EMEA market.

Data analysis finally shows that at the beginning of the 90's, even if local management achieved the site downsizing and if they managed to avoid the closure threat, they considered that these actions wouldn't be enough to actually anchor the site locally and ensure long-term survival.

"It was obvious that even if we won our industrial challenge, I mean even if we reduced the site to 500 people with the minimum square meters, it would not be a solution. […] If we just remain a manufacturing site, we have no chance to survive much longer, it would just slightly delay the closure process" (SITE DIRECTOR 1)

MID 90's: LOCAL ACTORS RECOGNIZING PARADOXICAL TENSIONS
A collective situational awareness

As we previously explained, after having first executed and then opposed global directives top management of Montpellier site seems to be aware that the situation is still complex and critical. But as explains the former plant director in an interview, his aim was then to transmit this

awareness to lower levels of management in order to involve more globally local teams into the site safeguard. He then decided to restructure its management team and to surround with young local managers.

"The plant director replaced all his relatively old and experienced managers with young ones. Because he knew they were going to dedicate themselves to the site safeguard. Their future was at stake" (HEAD OF SERVICE 3)

According to one of these former young managers:

"In such critical situations, there must be a general involvement in a common project. It requires leaders' ability to maintain a pool of people with responsibilities who understand the issues, who adhere to them and share the same vision" (HEAD OF DEPARTMENT 7)

In parallel, he chose to intensify communication and opted for transparency with the entire local teams. He instituted weekly sessions of dialogues where all levels of local employees were invited to discuss about the global context and changes that were ongoing, the consequences they may have for the French site and how they perceived the future of the site. According to the former plant director, surrounding with concerned and involved managers as well as widely communicating were decisive elements that permit a collective awareness and appropriation of context and challenges.

Competing local objectives

As the former plant director had previously foreseen, cancelling decision of stopping production in Montpellier was not a sufficient solution to ensure local long-term survival.

"We could not remain merely a manufacturing site because we knew that sooner
or later production would be relocated, and we thus had no chance to survive
much longer. We had to find a lifeline in order to prevent the plant from sinking
and to anchor it locally." (SITE DIRECTOR 1)

Local management of IBM Montpellier thus appeared to be confronted to local competing objectives for site survival: maintaining a same level of manufacturing activity while still reducing expenses while simultaneously diversify their mission of manufacturing.

"Everything got more complicated since we had to do everything at the same time:
downsizing, holding the production plans and trying to make sure that the site does not remain
only a production site." (SITE DIRECTOR 1)

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1994 – 1996 - SECOND RESPONSE TO PARADOXICAL TENSIONS: EMBRACING TENSIONS

We observed that local management then actively responded to this paradoxical tension since they simultaneously embraced both polarities: they aligned to IBM global strategy by developing a new service-oriented mission while also transgressing IBM rules and directives since they secretly developed this activity by hiding and diverting resources.

Aligning on IBM global strategy…

As we previously mentioned, when Lou Gerstner took the head of IBM in the early 90's, he clearly explained that IBM had to evolve towards providing services and solutions rather than only selling hardware: "*That was our first big bet – to build not just the largest but the most influential services business in the industry*" (Gerstner, 2002, p. 124). Therefore, while tasking subsidiaries and plants to drastically reduce their expenses, the new CEO ask them to evolve toward more added value activities, to "think solution" and to speak customer's language.

In an interview, the former plant manager explained that according to him, the only solution for Montpellier site to survive was to participate and to follow IBM transformation, to move in this direction: it could no longer simply exploit its technical skills to build mainframes and had to use its experience and know-how in order to upgrade toward customer services.

"We had to find a way to anchor and to stabilize the site locally. And it appeared that the way to stabilize it was to create a European competence centre, here in Montpellier. That's why we developed this customer demo centre." (SITE DIRECTOR 1)

Local teams, supported by the plant's manager, thus initiated the development of this new service-oriented activity. The purpose was to use mainframes produced locally in Montpellier as well as the expertise of local engineers and technicians in order to allow customers testing on the site, the solutions proposed by IBM sales teams.

… while transgressing rules and directives

If this new activity seems perfectly in line with IBM global strategy, by contrast, the way it has been implemented are deeply subversive.

Indeed, the objective assigned by the parent company at that time was to reduce expenses and not to develop new missions. So, in a context of resource scarcity and cost reduction, they decided to secretly develop this new mission and to hide it from headquarter.

"We hid it at first because we were trying to develop an activity that our world leaders did not want us to do. They wanted us to make big systems, at minimum cost, with the smallest

buildings possible and with the minimum of resources ... we were not asked to do anything else." (HEAD OF SERVICE 1)

Several informants use the term of "perruque" when describing the way this new activity has been developed. This term was used in the early days of industrialization to describe situations where workers, on their working time, used equipment and resources of their company to accomplish work that was not the one for which they were being paid, non-assigned by their hierarchy. It was thus by hiding this initiative from their external hierarchy that the site managers diverted some of their human and material resources towards the development of this new, service-oriented activity.

"We identify our best engineers, we isolate them, and we hide them. They are paid by the official manufacturing activity even though they are working to build the new mission. The aim is to keep it secret until the suitable moment and not before we are able to prove that we know how to do it." (HEAD OF DEPARTMENT 6)

1996: TOWARD A LONGER-TERM RELIEF

In 1995, the demonstration centre realized its first big mission. By simulating a solution of real-time betting, they enabled IBM's sales team to conclude an important deal with a large French customer. In 1996, the local management took advantage of a visit from Lou Gerstner in Montpellier to present him this successful operation. Montpellier site thus reinforced its position within the MNC by formalizing its new orientation towards customer service.

"We announced what we did only when we knew that the customer had signed the order and when the sales sent us a letter of thanks explaining that the sale would not be made without our demonstration. And so, at that time no one opposes, and everyone applauds." (HEAD OF SERVICE 7)

The CEO didn't blame local managers for this hidden initiative but actually congratulated them and gave official recognition to the customer centre which became the PSSC (Products & Solutions Support Centre) and is today a European competence centre employing nearly 600 people at IBM Montpellier site.

This new service-oriented activity allowed Montpellier site to gain longer-term relief since it diversified and upgraded the local mission of the site toward services.

DISCUSSION AND CONTRIBUTIONS

This article sets out to understand how managers can proactively navigate paradoxes when they are confronted to situations of turbulence and resource scarcity. Our findings have highlighted that the way managers deal with paradoxical tensions may evolved from a defensive response

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(splitting) toward a proactive one (embracing). To capture and explain this process of proactively navigating paradoxes we developed a grounded model that shows how managers shift from an either/or response that attempt to circumvent paradox to a both/and response that accept paradox. Figure 2 illustrates the two-step stratification process that emerged from our data analysis.

Figure 2 - A two-step stratification process of proactively navigating paradoxes
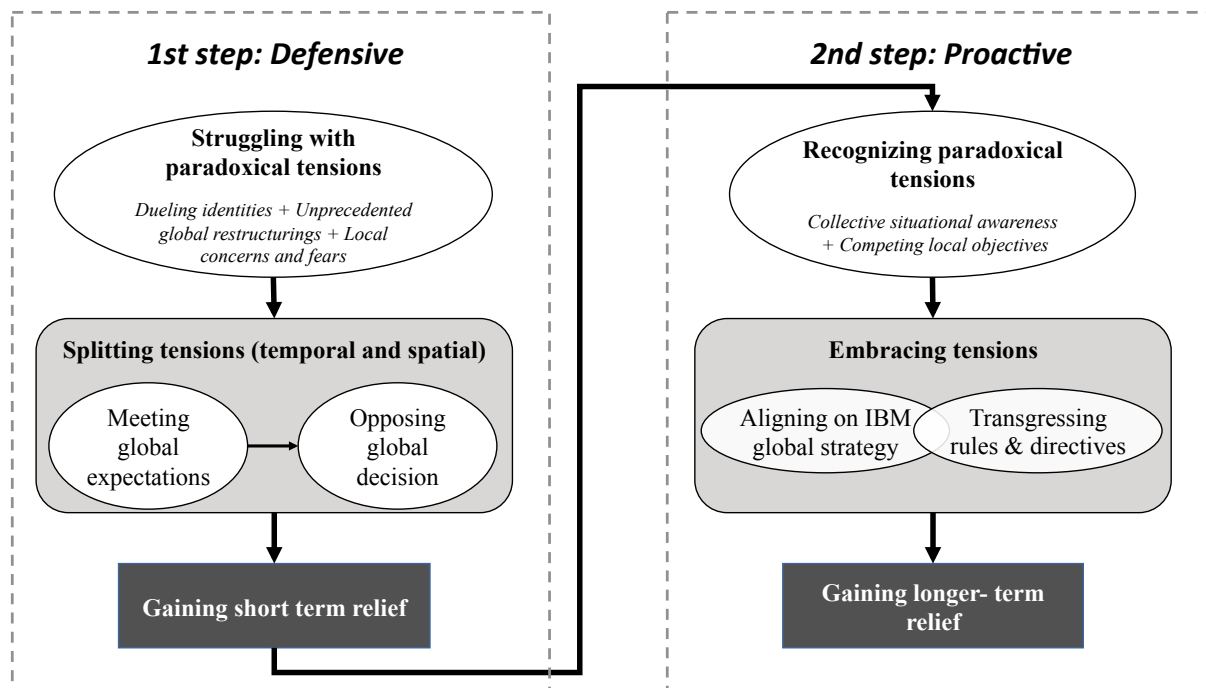
Our model shows that proactively navigating paradoxes may be decomposed into two main steps: a first defensive one followed by a second proactive one.

First step: a defensive response to suddenly surfacing tensions that will permit managers to gain some slack

In the first step of the process, local managers struggled with tensions in a context of important restructurings and resources scarcity. This situation leads to local fears and concerns and strengthens the dueling identity of local managers, torn between their global and local belongings. As a result, such a duality became a paradox as local managers had to simultaneously achieve global and local expectations such as achieving drastic objectives of cost reduction while preserving local interest and jobs. In line with previous studies on paradox's saliency, our model thus shows that contexts of resource scarcity and organizational

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changes tend to render latent tensions salient (E. Knight & Paroutis, 2017; Schad & Smith, 2018; W. K. Smith & Lewis, 2011). The first managerial response to these salient tensions was to split the tension: they first focused on the "act global" polarity by achieving drastic downsizings and then switched to the opposed "act local" polarity by opposing and reversing a global decision that threatened site survival. This either/or logic is considered in literature as a defensive responses to paradox since they try to avoid and circumvent the inconsistencies (Poole & Van de Ven, 1989; Smith & Berg, 1987; Smith & Lewis, 2011; Vince & Broussine, 1996). Finally our study shows that the outcomes of such approaches is a short-term relief which echoes for instance to previous work of Jarzabkowski and al. (2013) which explained that defensive responses « may enable actors to temporarily overcome paradoxical tension but do not provide a new way to work within or understand paradox » (2013, p. 248). However what existing literature does not say is that defensive response is not necessary an end in itself and thus not systematically a threat for organization's survival (P. Jarzabkowski et al., 2013; W. K. Smith & Lewis, 2011; Tripsas & Gavetti, 2000). As our model stresses, a defensive response may actually permit managers to "extinguish the flames" and to gain some slack. Indeed, as stresses by Freudian psychology, defensiveness is a natural reaction to the anxiety that inconsistency and uncertainty tend to provoke (Lewis, 2000; Vince & Broussine, 1996). Through this first defensive step, our process model thus shows that when confronted to unknown and unpredicted paradoxes, managers may have a natural inclination to adopt a defensive response. However this natural first approach may not lead to vicious cycle (W. K. Smith & Lewis, 2011) but may represent a first necessary step to gain a relief and to generate the necessary time to look for longer-term solutions. This search for a longer-term solution is represented in the second proactive step of our model.

Second step: recognizing tensions and learning to live with paradoxes for longer-term relief

Our model shows that a triggering condition of the second proactive step is the managers' ability to recognize paradoxes. While managers appear to be surprised by paradoxical tensions in the first step of our model, they now seem able to recognize and to anticipate tensions. It thus seems that the first defensive step permits managers to raise individual, then collective awareness of paradox's existence. Our study thus shows that cognitive acceptance (W. K. Smith & Lewis, 2011; W. K. Smith & Tushman, 2005) may be acquired over time, as a learning

process of a prior defensive response to tensions. In line with Lüscher and Lewis (2008), managers gradually surfaced and expanded "either/or" frames to "both/and" ones. However, we go further by first demonstrating that paradoxical cognition can be collectively transferred and transmitted, second that this not necessary an inherent capacity of managers but may be acquired over time, as an outcome of a prior period of defensiveness.

Finally, in line with prior work of Smith and Lewis (2011) or Smith and Tushman (2005), our model shows that paradoxical awareness allows managers to accept or even transcend tensions. We actually observed that to deal with tensions between a need to reduce cost while simultaneously initiate a diversification of their missions, local managers achieved the integration of the two poles in contradiction. They developed a new service-oriented activity that is perfectly aligned with IBM global strategy but to do be able to do exploration in a downsizing period, they had to transgress some rules and directives and to hide it from their top management. They thus simultaneously comply and transgress global expectations. In this stage of paradox management, the paradox remains "open" in an "and" logic (Lewis, 2000). Managers are now living and "working with paradox" (Lüscher et al., 2006; Lüscher & Lewis, 2008). Finally, our model shows that this proactive response to tensions allows managers to gain longer-term relief since it permitted, in our case, to preserve and stabilize local jobs.

Proactively navigating paradoxes: a two-step stratification process

The whole process related to the management of paradoxes in our case seems to echoes what Perret and Josserand call "stratification process" (2003). The authors defined it as a cumulative learning process characterized by phases where opposites are gradually assimilated. The authors do not delineate the complexity of the situation but make sense of the multi-facet and evolutionary character of paradoxes within organizations. In our case, two steps characterize this process: (1), a defensive step that lead to short-term relief and (2), a proactive step that permit a longer-term relief.

Our current findings do not permit to affirm the generalizability of our process model. Indeed, the setting of IBM Montpellier site is rich and relevant for studying the way managers may recognize and embrace tensions over time. However, it is a very specific setting and even if we believe that turbulent contexts are quite common in today's organizational life, the story of IBM and the way managers reacted to tensions may be idiosyncratic and thus not generalizable to other settings. However, we believe that the process model we proposed can serve as a guide

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for future empirical studies, among varied organizational contexts prone to paradoxes. This would allow to confront and enrich the current model.

Theoretical contributions

Our paper enriches prior work on "inclusive" responses to paradox by proposing that, in context of turbulences and resource scarcity, the capacity of working and living with paradox may be acquired through a two-step stratification process. A first defensive step followed by a second proactive one. Our work first contributes to literature on ways of coping with salient paradoxes. Indeed, we stress that contrary to what the current literature asserts, defensive approaches are not systematically opposed to proactive ones (P. A. Jarzabkowski & Lê, 2017; W. K. Smith & Lewis, 2011; Van de Ven & Poole, 1988). They may instead be complementary since defensive responses appears to sometimes represent a first natural and necessary step that will then enable a more global "stratification process" of learning to live and work with paradoxical tensions. We also contribute to paradox theories by showing that unlike what is commonly accepted in the literature, defensive responses do not systematically lead to vicious cycles (W. K. Smith & Lewis, 2011) or even to organization's survival threat (P. Jarzabkowski et al., 2013). In changing contexts and under resource restriction, defensive approaches may in fact allow managers to gain some slack and to develop paradoxical cognition that will enable an evolution toward proactive responses and longer-term success. Our study also contributes to prior works on paradoxical cognition. Indeed, current literature asserts that the capacity to recognize paradox is a necessary condition for doing both/and responses, but this literature tends to consider that this is an inherent capacity of manager (i.e. managers are able or not to think paradoxically). What we show in this study is that this paradoxical cognition may be acquired over time and especially through a first experience of defensive response to paradox. Indeed, the first defensive step allows disrupting managers' ingrained modes of thinking, and help managers reframing their assumptions to consider polarities as complementary and interwoven (P. A. Jarzabkowski & Lê, 2017).

Managerial contributions

In line with Smith et al. (2017), our findings shows that complexity of current organizational contexts requires managers to understand "the range of tensions experienced, and to learn how to respond in different, more complex and integrative ways" (2017, p. 304). Managers have to identify tensions not to solve a problematic situation but to consider paradoxes as spaces of freedom, as doors left open that finally might allow modifying or countering certain decisions.

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Managers may transcend paradox, which means reframing thinking to consider paradoxical tensions as complementary and interwoven (P. A. Jarzabkowski & Lê, 2017). Transcendence thus implies that managers do not try to solve tensions but instead chose to rely on their intricacies to build new propositions. We thus argue that managers have to pay attention so that they read their organizations accurately – that is, they have to be aware of the complexity of their environment by thinking paradoxically to order chaos and act in time to channel the dynamism of paradoxes through their decision making. Managers need to recognize tensions and to learn to live with them, which includes learning to manage anxiety they generate(Lewis, 2000). Some managers will intuitively try to suppress these tensions (Vince & Broussine, 1996), while exploring them may enhance the possibility of discovering links and new perspectives. This study thus encourages managers to proactively recognize tensions (Lewis et al., 2014) and to embrace inconsistencies. Instead of waiting for turbulences to stop, they need to investigate and capture the enlightening potential of paradoxical tensions (Lewis, 2000). Sustaining strategic paradoxes within complex contexts can foster sustainability (W. K. Smith, 2014; W. K. Smith & Lewis, 2011) and enable creativity (D. J. Knight & Abraham, 2001; Miron-Spektor et al., 2011). Grasping the paradoxes allows a space of freedom, a room for manoeuvre to managers, by opening perspectives

CONCLUSION

The aim of our study is to understand the process through which actors learn to identify, recognize and embrace tensions in a context of turbulence and resource scarcity. We propose a two-step stratification process of proactively navigating paradoxes. The first defensive step allows actors to gain slack and to acquire the paradoxical recognition that allows them to enter into a second proactive step. In the second phase, managers are able to embrace tensions and to finally gain a longer-term relief. We contribute to the paradoxical literature in different ways. First, by emphasizing that defensive approaches are not systematically opposed to proactive ones. They may instead consist in a first necessary step in a more global "stratification process" of learning to live and work with paradoxes. Second, by stressing that defensive responses do not lead only to short term but may allow generating slack, which is more and more sought in today's strongly constrained organizational contexts. Third, by showing that paradoxical cognition is not necessarily inherent to managers but can be acquired through the first step of our stratification process. Finally, regarding practical implications, our study highlights how

managers may learn to address contradictions of their every day's organizational life with a more complex and integrative approach.

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