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**Dualities in international management: Exploring the role of managers as
organizers of standardization/adaptation**

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ABSTRACT

In the international context, managers often face a contradictory imperative to organize the interpretive frames and actions of teams towards standardization/adaptation (a duality). Current etic approaches, entity perspectives, and variance models used to understand this phenomenon are limitative. Three inductive studies explore the role of managers from process perspectives and draw on theories of duality, sensemaking, and routines, to develop insights on how managers enact the work environment, use dynamic interpretations over time, and combine routinized and non-routinized behaviors to address the duality. The studies contribute to an open dialogue among different theoretical perspectives, opening new avenues for research.

Keywords: International Management; Management dualities; Sensemaking; Networks of routines; Inductive research

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ACKOWLEDGMENTS

Many friends changed my way of seeing the world during this period. I found new friends to build ideas and share pains. I let some friends go with that common excuse of lack of time. I found very old friends that showed me how time is an illusion and reminded me of the beginning of this journey. I had excellent teachers and companions in learning. How easy it is to forget and how grateful I am to remember. Carla, Fonseca, Só, Sónia, Ana, Rita, Rita, Raposo, Miguel, Rute, Rute, Isabel, José, and Filipas. All of you contributed to this moment.

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And to Pedro, with whom I share the bright and dark side of life. There is no possible way of saying what you mean to me, so I will just end with the most important words. They only make sense to us and will always remind us that sarcasm and empathy will save civilization: "We all think the bag was a nice idea, but without pointing any fingers… it could have been done better", "All boundaries are conventions", "Witness me!", "I'm Groot", and "I have a fever and the only cure is more cow bell". Because we make our own La La Land, "a bit of madness is key to give us new colors to see. Who knows where it will lead us? And that's why they need us…

<div align="right">… here's to the mess we make.</div>

CHAPTER 1. INTRODUCTION

Globalization is a space-time compressor that raises complex challenges to management. One important concern is how to organize collective action to achieve efficiency in geographically dispersed operations while respecting the differences among interpretive frames and practices across the world. Efficiency and responsiveness are usually seen as trade-offs: to achieve the first goal, organizations need to increase the replication of processes across the globe; to achieve the second goal, they need to do the opposite, that is, to reduce replication (in other words, to increase change/ adaptation). The contradictory imperative to simultaneously replicate and change the interpretive frames and practices across locations is designated henceforth as "standardization/adaptation"[1] (Bartlett & Ghoshal, 2002; Benito, Lunnar, & Tomassen, 2014; Birkinshaw, Crilly, Bouquet, & Sun Young, 2016; Devinney, Midgley, & Venaik, 2000). In the studies that follow, the main interest is in the role of international managers as organizing agents that constantly address this contradictory imperative.

As organizing agents, managers configure micro level elements to address macro orientations (Puranam, Raveendran, & Knudsen, 2012; Weick, 1979). They use a mix of management and leadership practices and often rely on sensemaking, which includes handling thoughts, words, and actions (Eggers & Kaplan, 2013; Wilden, Devinney, & Dowling, 2016; Weick, 1979). Management processes are usually defined as directing and controlling the collective performance through structures, procedures, and rules, while leadership processes are described as influencing the thinking, values, and emotions of

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[1] In the international business literature, the duality is also studied under "global integration/local responsiveness" dilemmas, developed from models on differentiation/integration (Devinney et al., 2000). Along the dissertation "standardization/adaptation" is consistently used to simplify the reading process, but the studies combine literature that uses other words to refer to the same replication/change of processes and practices across locations.

followers (Alvesson & Spicer, 2012; Bird & Mendenhall, 2016; Hernandez, Eberly, Avolio, & Kohnson, 2011; Mintzberg, 1981). The most relevant decisions on standardization/adaptation are made by managers with responsibility over operations in different geographies, which usually implies that they are accountable for large-scale outcomes (and resources) with high value/risk in the organization. This tends to situate the study of standardization/adaptation in the realm of strategic management and business model research (Devinney et al., 2000; Grifith et al., 2008; Birskinshaw et al., 2016; Massa, Tucci, & Afuah, 2017), leaving a blind spot in the literature on organizational behavior that this document explores. In fact, from the point of view of managers as organizing agents, the need to standardize and/or adapt may appear in day-to-day experiences with teams. In this sense, the study of this phenomenon should not be limited to strategic decision-making processes that happen in specific places and at specific times, as all experiences of organizing work are important to build organizational capabilities (Eggers & Kaplan, 2013).

The number of studies that seek to understand how managers address conflicting imperatives is growing (Birkinshaw et al., 2016; Putman et al., 2016; Schad et al., 2016) but recent approaches have not been explicitly integrated in the international management literature. Over the last 20 years, the academic perspectives on conflicting demands have changed from a contingent to an interdependence perspective (Smith, Erez, Jarvenpaa, Lewis, & Tracey, 2017). Scholars started with differentiated research on dilemmas/trade-offs, paradoxes, dialectics, conflicts, tensions, ambidexterity, and balancing acts (Putnam, Fairhurst, & Banghart, 2016). These streams are now setting a stage to integrate knowledge under a meta-theory that intends to address contradictions with more comprehensive understandings while keeping the plurality of approaches alive (Birkinshaw & Gupta, 2013; Birkinshaw et al., 2016; Hargrave & Van de Ven, 2017; Putnam et al., 2016; Schad, Lewis, Raisch, & Smith, 2016; Fairhurst et al., 2016; Smith et al., 2017). In this document the word

"duality" is used to refer to organizing options that managers may see as opposing but also interdependent, which goes in line with dynamic models that have been developed in the research on paradoxes (Smith, 2014; Smith & Lewis, 2011) and contradictions (Putman et al., 2016). In its effort to clarify how different theories relate and differentiate, the field remains highly abstracted and needs empirical research to articulate theories with the everyday life of organizations (Smith et al., 2017). Although the international business context is recognized as a promising site for this type of research, its potential to advance empirical support to dualities' research is underexplored (Hargrave & Van de Ven, 2017; Smith, 2000).

These considerations inspired the overall research question that binds three studies presented in this document: "***How do managers organize the actions of teams in the international business context, to address the duality standardization/adaptation?***". The problem of organizing is not seen as a mere problem of design and decision-making, but of enactment through interpretation, discourse, and action in a socio-material world (Putnam, 2015; Robichaud, Giroux, & Taylor, 2004; Sandberg & Tsoukas, 2015; Weick, 1979), and the role of managers is emphasized over the role of other organizing agents because they have an asymmetric influence on these processes (Wilden et al., 2016). To organize collective action, managers interpret the international context and work environment, decide (or not) upon options (already constrained by previous options), and deploy them in the organization, thus establishing the environment used in the subsequent round of decisions (Luhmann, 2013). The focal point of interest is thus neither the individual features of the manager nor the articulation of the duality as a strategic challenge, but the sensemaking and enactment processes that connect managers with their socio-material environments, in which collective actions are created and simultaneously create them (Weick, 1979). The level of the interaction of managers with collectives was chosen because much of the work in organizations happens in the context of groups and teams that connect strategic decisions

with their socio-material execution, and there is a deep dissatisfaction with current approaches at this level (Eggers & Kaplan, 2013; Mathieu, Maynard, Rapp, & Gilson, 2008; Waller, Okhuysen, & Saghafian, 2016; Wilden et al., 2016).

In terms of context, the question relates to a stream of literature in which the word "global" co-exists with "international" with no clear distinction (Brannen & Doz, 2010; Bird & Mendenhall, 2016; Mendenhall, et al., 2016; Grifith, et al., 2008; White III et al., 2016). This literature builds on general theories of management and strategy, and broader psychological and social research, and thus copes with different perspectives on management and organizing. Calls for dialogue among perspectives and interdisciplinarity have been made in the last years (Brannen & Doz, 2010; Cheng, Birkinshaw, Lessard, & Thomas, 2014; Romani, Primecz, & Bell, 2014). I engage the inter-perspective dialogue with the goal of increasing practical rationality (Sandberg & Tsoukas, 2011) and follow Luhmann (2013) in his argument that, because scientific fields use different analytical languages to carve out phenomena from a unified reality, the inter-perspective discussions must be articulated at a higher level of abstraction (in which different languages can talk to each other). The intention here is to not only explore blind spots in a specific theory but also to contribute to the dialogue among the different theoretical fields. The studies thus approach the overall research question from a process ontology but use and discuss insights from different research fields (Tsoukas & Chia, 2011).

The desire to enrich this dialogue influenced the observation of different aspects of organizing (Czarniawska, 2008). First, organizing is observed "as enactment of context", to understand how multiplicity and flux are brought alive by managers in the work environment. Entity and process perspectives interplay in this discussion. Next, organizing is observed as "enactment that extends over time", to understand how managers change their views on the duality standardization/ adaptation. Perspectives on international management and

management dualities are integrated in this discussion. Lastly, organizing is observed as an act of "design of networks of actions". Theories on routines and management dualities are integrated there. Each observation point is contemplated in a different study that addresses a specific sub-question.

The first study is articulated in CHAPTER 4: ORGANIZING AS ENACTMENT OF CONTEXT[2], and aims to extend theory on how managers organize interpretive frames. The research question underlying the study is "How do managers enact multiplicity and flux in the global work environment?". The observation point used in this study is the micro level (interpretations of managers) and the unit of analysis is the relationship of managers with environment. The environment is partly a creation of organizational actors (Pettigrew, 1990; Weick, 1979) and so the study aims at understanding how the cultural fragmentation used in current omnibus descriptions of the global business context is experienced by managers in situated contexts. The understanding of what standardization/adaptation means to them and their teams will depend up to a point on this perception.

The second study questions how the duality standardization/adaptation is understood by managers over time and how that influences the way they understand their role as organizers. This research is presented in CHAPTER 5: ORGANIZING DUALITIES OVER TIME[3] which is guided by the sub-question "How do managers make sense of the organizing duality standardization/adaptation over time?". The observation point in this research is also the individual level and the study takes a longitudinal perspective. The units of analysis are

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[2] This chapter presents a latest version of a paper co-authored with Joana Story and Miguel Pina e Cunha, which has been submitted to the Journal of World Business and incorporates valuable contributions from the Editor and two anonymous reviewers. Earlier versions have been presented at the Annual Symposium organized by EGOS (2016, Naples) and the PhD Seminar on Organizations, Management, and Theories of the Firm (2015, Appenzell), and submitted to the Journal of Management Studies. I thank the valuable comments from Editors and anonymous reviewers and the contributions from the discussants and audiences in the presentations.

[3] This chapter presents the latest version of a paper co-authored with Joana Story and Miguel Pina e Cunha. An earlier version of the paper was presented at the 77th annual conference of the Academy of Management and was honoured with the consideration of Best Paper by the International Management Division. An abridged version of the paper was published in the Proceedings of the 2017 Academy of Management Meeting and can be found under: "Oliveira, S., Story, J., & Cunha, M.P. (2017). Managing ongoing dualities in international business. In Guclu Atinc (Ed.), Proceedings of the Seventy-seventh Annual Meeting of the Academy of Management. Online ISSN: 2151-6561". An earlier version of the paper was submitted to the Journal of International Business Studies, from which we collected important feedback. I thank the valuable reviews from the anonymous reviewers and the contributions from the audience in the presentation.

the sensemaking structures internally developed by managers over time to cope with the dual demand(s) they perceive in the environment.

The third study questions the organization of collective action and is presented in CHAPTER 6: ORGANIZING NETWORKS OF ROUTINES[4]. The observation point used in this study is the meso level and the units of analysis are actions and networks of routines. The study is guided by the question "How are routines (re)organized to address management dualities in two-sided global networks?". The goal is to identify configurations of actions that managers consider in their role of organizing agents, and to understand how they influence these configurations to address dualities.

Although all studies focus the duality standardization/adaptation in the international context, they follow integrative and dynamic perspectives on duality management (Hargrave & Van de Ven, 2017; Putman et al., 2016; Smith & Lewis, 2011) and thus also offer insights to the overall management of dualities, because this duality might manifest through other organizing and performative tensions (Smith & Lewis, 2011). The international context is thus explored by its potential to address research questions that matter to other contexts. My previous experience as a management consultant with diversified experiences in different contexts, as an expatriate manager in multicultural contexts, allowed me to enrich the interpretation process with narratives and anecdotes collected from informal conversations with managers with international challenges. These conversations motivated the interest in the multiplicity and flux faced by managers in the international context, and the possibility to extract insights that create value to research in other contexts. During the research, I endeavored to remain mindful of how previous experience was being brought to the analysis, and cross-checked my insights with my co-authors and with discussants on public presentations, to increase trustworthiness in the inductive process (Silverman, 2013).

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[4] This chapter presents the latest version of a paper presented at the annual Symposium organized by EGOS (2017, Copenhagen). I thank the contributions of David Seidl who inspired the study and of valuable comments from the discussant and audience in the presentation.

This introduction is not completed without an open consideration to the use of distinctions in the reasoning produced with my co-authors and used in the writing process. In fact, while the studies stand for a process ontology (Tsoukas & Chia, 2011) and use interdependence perspectives on opposing concepts (Smith et al., 2017), they not only use dualities such as structure/process, global/ local, and individual/ collective in the arguments but also abstraction/concrete as different levels of experience, as if restoring a mind/body duality. I clarify that this is an analytical device used to discuss important phenomena that are nevertheless two faces of one same reality. To understand others' ideas and the empirical world, research is also captive of a dual and abstracted way of expressing, which should in no way prevent researchers from mushing everything again to entwined realities in their readings.

CHAPTER 2. THEORETICAL BACKGROUND

With studies centered in "international" and/or "global" contexts, management and leadership researchers recognize that human action does not follow universal patterns across the world, because although similar in biology, humans are socialized through local processes (Bird & Mendenhall, 2016; Cheng et al., 2014; Mendenhall et al., 2012). They intend to raise specific questions related to organizing phenomena that extends over different geographies and national borders, and use insights from psychological and social sciences that follow different assumptions. In this sense, they face a tough ontological, epistemological, and methodological debate about what should be taken as the constitutive element of reality (entities/relations and structure/process), on how these elements change and constitute new realities (reductionism/holism and transformation/ variation), and on how we can know it (subject/object and etic/emic) (Devinney, 2013; Romani, Primecz, & Bell, 2014; Sandberg & Tsoukas, 2011; Thompson, 2011; Silverman, 2013; Tsoukas & Chia, 2011). This chapter briefly explains how different views generate different studies in the field of international/global management and clarifies my position, as it influenced my options on how to pursue the research that supports this dissertation. Specific theoretical reviews are presented in each study.

2.1. ONTOLOGICAL PERSPECTIVES AND MANAGEMENT RESEARCH IN INTERNATIONAL/GLOBAL CONTEXTS

Researchers in the field of international business and management entailed an important effort in the last decade to clarify and strengthen the definitions of

international/global as opposed to national/local, and to understand the value of setting the field apart from others in terms of research (Griffith et al., 2008; Whitte III et al., 2016). They share some beliefs (Devinney & Hoghberger, 2017; Griffith et al., 2008; Romani et al., 2014): (a) international/global and national/local contexts are different environments interacting with people and businesses in distinguishable ways; (b) although the underlying differences between the contexts can be observed in different patterns and described in several ways, the common root is described as the influence of geographical distance and national culture on the way people make sense of their world and organize their actions; and (c) international/global contexts bring increasing challenges related to higher complexity, ambiguity, and unpredictability. Nevertheless, their studies materialize with different views of the world and of the scientific approach that should be used to study it. In management research, the debate on ontology and epistemology relates to different assumptions about what are managers, teams, organizations, and contexts, as well as how they relate to each other and how researchers can approach them. The question has been defined in terms of flatter or taller ontologies (Seidl & Whittington, 2014) or in terms of the structure-process paradox (Thompson, 2011), in the sense that it raises questions on how to study phenomena that seem to emerge at different levels and on what the "levels" stand for, a problem known as the micro-macro problem (Devinney, 2013; Winter, 2013). Two possible views opened different fields of research[5].

The first view is inspired by vertical ontologies (Seidl & Whittington, 2014) and entity-perspectives (Tsoukas & Chia, 2011) and is dominant in international and global research (Osland, Li, & Wang, 2014; Romani et al., 2014). Organizations are conceptualized as entities/structures that aggregate individuals, both functioning in stabilized states and both

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[5] The definition of the number of ontological perspectives that divide scientific fields is not consensual, and sometimes the "sensemaking", "communication" and "practice" perspectives are also considered ontological diverse from these two (Tsoukas & Chia, 2011). In this dissertation, however, I wish to emphasize the processual character of these three perspectives, which were dominant in my research, and so explain them in the line of the process-perspective.

capable of changing to adapt to an environment that is seen as an external reality. This perspective uses the concept of levels to approach organizational phenomena as objects of study (focal unit of analysis), which are typically arranged in hierarchical orders such that higher levels include lower levels, and lower levels are embedded in higher levels (Yammarino & Dansereau, 2011; Rousseau, 1985). From the perspective of the focal unit, lower level phenomena are explained through reduction, higher level through emergence, and cross-level through homology mechanisms (Yammarino, & Dansereau, 2011). A multi-level model describes patterns of relationships replicated across levels and considers lower and higher perspectives on phenomena. Phenomena at the focal unit can be explained as the sum or aggregation of lower level phenomena treated as discrete elements, or through holistic mechanisms, when the whole is an organized system of parts defined by interrelations (Rousseau, 1985). This view may use etic approaches to phenomena by investigating it from the outside and using predefined concepts or dimensions (in line with deductive and positivist approaches), or emic approaches by investigating from the inside to understand how they emerge at different levels through meanings and interaction (in line with inductive and interpretive approaches) (Romani et al., 2014).

A second view, inspired by flat ontologies (Seidl & Whittington, 2014) and process-perspectives (Tsoukas & Chia, 2011), proposes that individuals and organizations do not exist as stable entities and can only be understood as clusters of coupled processes, in which events and interrelations are the constitutive element. While the previous view works towards a clear definition of the phenomenon of interest, level of research, antecedents and consequents (the "variables"), this view works with changing phenomena and is interested is the connections, the evolving mechanisms that keep the variables carved out from the ongoing flow of events (Langley, Smallman, & Van de Ven, 2013), although it might produce variance or process models (Langley, 1999). This view tends to avoid the use of "level" and instead describes

temporary networks or clusters of events, to show that micro and macro are only analytical

devices, ways of talking about the world and not entities or levels that can be clearly carved

out from the flow of events (Pettigrew, 1990; Luhmann, 2006). To approach the phenomena

that seem to emerge at what we humans see as entities and levels, theorists propose instead

the idea of using different observation/analysis points (Luhmann, 2013), observing small and

large phenomena in terms of how actions connect in space and time (Schatzki, 2002), and

zooming in and zoom out to observe and describe phenomena (Nicolini, 2009). This view

tends to use emic approaches to study the connections and interrelations, as it is deeply

interested in the everchanging dynamics of situated experiences (Langley et al., 2013; Weick,

2012). The dissertation follows a process ontology and emic approach, but aims to integrate

understandings with more vertical ontologies. The studies thus borrow constructs that were

developed by other perspectives, use the concept of level to facilitate understanding (although

recognizing that it is only an analytical device), and use the mechanisms of shifting

observation points and zoom in/out to approach phenomena at different levels.

Process-ontologies, although united in the argument that researchers should not

assume the stability of entities, structures, and variables, have different views on what drives

the clustering/coupling of identities and boundaries (Tsoukas & Chia, 2011). One line of

research focus on communication/sayings as the process that binds events and the other focus

on actions/doings (Seidl & Wittington, 2014). Both defend the unity of communication and

action, and both frame them in a socio-material world, but explain phenomena in different

ways and have built different research streams (Putnam, 2015). The first view sees the social

world as a world of interaction through communication and meaning, in which actions are

analyzed from their communicative/sensemaking power (Ashcraft, Kuhn, & Cooren, 2009;

Cooren, Vaara, Langley, & Tsoukas, 2014). The second sees the social world bonded by

actions, in which sayings are a type of action (Schatzki, 2002; Seidl & Wittington, 2014;

Feldman, Pentland, D'Adderio, & Lazaric, 2016). There are voices pro and against the development of a common field for these two views (Cooren et al., 2014; Putnam, 2015), and while the debate proceeds elsewhere, the dissertation uses insights from both perspectives to understand how managers organize collective action, and brings sensemaking theories that use the concept of enactment to articulate a duality of communication and action (Weick, 1979). The first two papers study the sensemaking processes that connect events/experiences of different managers in their environment and through time, and the last paper emphasizes the connections that bind collective actions.

One of the main consequences of using different assumptions to explore the world is the way the relation of actors and contexts are thought-out in management and leadership research (Hernandez, Eberly, Avolio, & Johnson, 2011). In international management literature, actors are usually individuals, teams, and organizations, influenced by different cultures and increasing interdependence that create multiplicity and flux in the context (Mendenhall et al., 2012). Managers are individual actors influenced by their national culture and context is seen mainly as an external constraint to their decisions and actions. As organizing agents, they must design configurations of actions that spread through large distances and cope with differences that manifest in the context, in terms of markets, competition, legal systems, supply chains, ways of working, and social expectations (Bartlett & Ghoshal, 2002; Benito et al., 2014; Bird & Mendenhall, 2016; Ghemawat, 2007; Whitte III et al., 2016). They orchestrate actions in different ways and thus create organizations that go from a tight system of interactions that responds to centralized decisions in a headquarter, to a loosed coupled system that operates with a single legal identity but many different practices across the globe (Bartlett & Ghoshal, 2002; Orton & Weick, 1990). In the last years, the metaphor of the network dominates both the literature and the practice of international

business, and organizations have found new ways of extending and coordinating actions[6]

(Benito et al., 2014). Different configurations of actions in international firms create different

situated contexts for work in which the duality standardization/adaptation becomes salient,

yet these are rarely addressed in international/global management research.

Globalization brings complexity to organizing collective action both in organizations

that operate in one country and in organizations that have their operations spread across

geographies, although with different impacts. When the business is anchored to one country,

changes in the environment are also absorbed by neighboring players and thus organizations

co-evolve with national/local practices. For organizations that operate in several countries

and keep resources moving between locations, co-evolution with local practices may not be

possible or desirable (Bartlett & Ghoshal, 2002). Organizing configurations of actions

becomes an issue of accommodating these differences while promoting efficiency at global

level. The duality standardization/adaptation is understood along the dimensions of strategy

and culture (Bartlett & Ghoshal, 2003; Devinney et al., 2000), which face problems of

theoretical integration (Brannen & Doz, 2010). Strategic challenges are usually connected to

how managers understand the differences in business practices across the world and integrate

them to build effective and efficient configurations of actions. Cultural challenges are

connected to how they understand the differences in human behavior across the world and

integrate them (this usually means relating them to different manifestations of national

culture), and how they interact with individuals from other cultures. In this sense,

management challenges have been stated in terms of increased difficulties related to

information (multiple sources, interdependence, ambiguity and equivocality), communication

(multiple channels and networks that demand boundary crossing) and physical presence or

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[6] The third study presented in Chapter 6 shows an example of a local business unit expanding and transforming in the direction of a two-sided global network and explains how that brought salience to the duality standardization/adaptation and affected the organization of collective actions in routines.

mobility (the manager or resources) across geographical and cultural boundaries (Mendenhall et al., 2012).

The effort to clarify the nature of international/global challenges, led to descriptions of context as a reality external to managers, and reducible to a few (comparable and measurable) dimensions (Mendenhall et al., 2012). Process perspectives admit that the separation of manager from environment is analytically used by managers (and by researchers) to think and talk about context, but actors and environments constitute each other (Pettigrew, 1990). The separation is the eye of the observer, not in the living experiences of the actors (Luhmann, 2013). From an etic perspective, the environment can be described as what surrounds the manager, what the manager reacts to, or what the manager has to cope with. Yet, to the manager, involvement with environment is the most basic form of being, and this influences all organizing endeavors (Van Manen, 2014). To honor this view, the dissertation investigates the problem of how managers address standardization/adaptation by using emic approaches and assumes two different observation points. First, considering how managers make sense of environments and interpret the duality over time. Second, observing collective actions to uncover configurations of actions that they may consider when addressing dualities.

A second important consequence is the way "culture" is defined and studied, its relation to a "nation", and its impact in managers, teams, organizations, and context (Devinney & Hohberger, 2017; Giorgi, Lockwood, & Glynn, 2015). Generic research on management and leadership does not usually consider "national culture" to be a determinant of context, as it continues to follow universal approaches and propose worldwide generalizable assertions on management and leadership practices (Dickson, Castaño, Magomaeva, & Den Hartog, 2012). One of the reasons to create an international/global management field was to step away from these universal approaches and recognize

differences and similarities among indigenous practices around the world (Griffith et al.,

2008). Yet, the term "culture" itself is not used with consensus. It may refer to different sets

of constructs such as values, believes, and practices, that result from the use of different

processes in different social groups and may be clustered in different ways (Giorgi et al.,

2015). The way "culture" is studied leads sometimes to confusion between culture as a social

system, with the manifestations of culture in the interpretive processes at individual and

group level (Devinney & Hohberger, 2017; Caprar, Devinney, Kirkman, & Caligiuri, 2015;

Tung & Verbeke, 2010). Most studies rely on the assumptions that local expectations are

similar (at least partially) among individuals that were born and/or raised in the same culture

and can be abstracted into "cultural dimensions", and that this similarity will manifest in

traits of individuals and groups, challenging work interactions in which individuals from

different cultures interact (Devinney & Hohberger, 2017). Because actions have to be

grounded in local behaviors and these are influenced by different national cultures, simply

replicating actions across the world will not be an adequate strategy, and thus

standardization/adaptation is an organizing duality that depends on how different cultures are

understood by managers.

The concept of nation is clearer, in the sense that it represents legally defined borders,

but the coupling of one culture with one nation is deeply challenged, as the idea that the same

set of values and practices influences all individuals born and/or raised in a specific nation

does not resonate with empirical evidence that showed differences between individuals,

between groups inside one nation, and similarities among nations (Dorfman, Javidan,

Hanges, Dastmalchian, & House, 2012). In our globalized and functionally specialized

society, national culture may still be recognized when comparing some values and believes at

nation level, but these may be less and less stable and normalized between members and thus

may have limited explanation power when describing social interactions (Luhmann, 2013;

Devinney & Hohberger, 2017). In this sense, the influence of national culture on expectations of people is supported in data from comparative and cross-cultural studies, most notably the GLOBE project, which involved more than 200 researchers in more than 25 countries (Dorfman et al., 2012), but these studies are under theoretical and methodological criticism and concern (Caprar et al., 2015). These different approaches to national culture and its impacts over manager-environment interplay are questioned in the first article presented in the dissertation, which offers explanations from sensemaking theory to question if cultural differences are always present in work-related interactions.

A third important consequence is related to the way managers and organizations can successfully operate in the international/global context. Success has been associated with the ability to cope with highly complex scenarios and situations, with different cultures, or with both (Bartlett & Ghoshal, 2002; Steers, Sanchez-Runde, Nardon, 2012; Thomas & Fitzsimmons, 2008).

At individual level, contributors to success have mainly been searched in the "traits" of managers, particularly on how they match information processing in strategic decisions, and the cultural dimensions manifested in interactions (Burns, Nieminen, Kotrba, & Denison, 2014; Devinney & Hoghberger, 2017; Mendenhall, 2013). Rarer studies emphasize the process of adaptation to different realities. The proposal of current research is that the fit of structural features of individuals (personality, ability) and collectives (expectations determined by dimensions of national culture) will determine success (Burns et al., 2014; Devinney & Hhberger, 2017). This proposal raised recommendations on management and leadership. Organizations should attract, develop, and retain managers with traits that fit the global challenges and are capable of adapting to the local expectations. Human resources management should be directed at finding and nurturing potential managers with these traits. However, even assuming that individuals develop patterns that can be effectively identified

and measured as traits, finding and developing them are not easy tasks and may take long. Consequently, organizations are always facing a quantitative and qualitative gap concerning these valuable individuals (Bartlett & Ghoshal, 2003; Gupta & Govindrajan, 2002). This proposal in challenged in the first study, which offers the possibility that this match/structural fit in terms of cultural dimensions might be relevant in some environments but not all. This is done in the first study, which aimed to understand how successful global managers enact different work environments.

Success of collectives is searched at group, team, and organization levels and is usually understood as timely responses to changes which involves balancing standardization with adaptation, formalization with flexibility, and global dictates with delegation (Bartlett & Ghoshal, 2002; Benito et al., 2014). The much the internationalization strategy implies interdependence of processes across national borders the much the success is deemed to depend on the ability to balance between worldwide and local realities. This points to the management of dualities as a contributor to success in international contexts. However, the interdependence perspective on management dualities (Smith et al., 2017) has not been explicitly discussed in this scope. One of the goals of the second article presented in the dissertation is to start an open dialogue with this literature.

A forth concern in the field comes from the asymmetry in perspectives used in empirical studies. Although at theoretical level the field recognizes different research perspectives and has built process models, empirical studies are still dominated by etic perspectives that use deductive studies to develop variance models. This asymmetry has led to calls on more qualitative and exploratory research on the field (Birkinshaw, Brannen, & Tung, 2011), which the three papers in the dissertation aim to address.

2.2. ORGANIZING COLLECTIVE ACTION TO ADDRESS THE DUALITY "STANDARDATION/ADAPTATION"

Process perspectives consider that all managers and organizations must address the problem of turning perpetual novelty into actionable similarity, but at the same time must avoid mistaking significantly novel conditions as occasions for mere repetition of a familiar response (Weick, 1979). While for all organizations this challenge relates to how they face events over time, in international business contexts it also relates with how they operate as one entity across different geographies. To exist at global level, organizations must be able to act locally (Bartlett & Ghoshal, 2002; Devinney et al., 2000). If they insist to replicate all practices across the globe they may fail to address local particularities and if they insist to adapt all practices to local expectations they will lose their global identity (Benito et al., 2014). In this sense, standardizing and adapting can be seen as opposing organizing options that define each other in terms of replication and change.

Traditionally these options were understood as contradictory, and managers and researchers tended to consider them by describing the poles of the contradiction, emphasizing the differences between them, and using either/or reasoning to support decision-making processes (Clegg, Cunha, & Cunha, 2002; Smith & Lewis, 2011). This view considers the options as dilemmas that should be addressed by managers (Smith & Lewis, 2011). In recent years researchers have tried to find ways of changing this dichotomic view, and emphasize the interrelation among poles and their possible integration, or ways to transcending the opposition (Putnam et al., 2016). These views look for the paradoxical, dialectical, and integrative nature of the contradictions, and are being discussed to set an interdependent perspective on dualities, paradoxes, tensions, and contradictions (Smith et al., 2017). This field has produced richer understandings on how managers, especially in Western countries,

can accept and transcend contradictions, among which standardization/adaptation is described as an organizing paradox (Smith & Lewis, 2011).

Standardizing and adapting have been substantially studied in the international business literature as imperatives that become salient in strategic decision-making processes (Benito et al., 2014; Birkinshaw et al., 2016; Devinney et al., 2000; Fredberg, 2014). However, we know that dualities interplay and may transform among many levels of interpretation, and from situation to situation (Smith & Lewis, 2011; Putnam et al., 2016). It is thus expectable that this duality spreads through different levels in the organization and that managers face a similar challenge when organizing the work and interactions with teams that directly report to them but operate in different geographies and use different interpretive frames. At this level, the conceptual thinking about the duality interplays with socio-material worlds that establish a different context for organizing endeavors (Putnam, 2015). Current research does not explore how this duality manifests in organizing endeavors at this level, which constitutes a blind spot that may prove important to understand organizing in international contexts. The dissertation partially explores this blind spot and reflects on the issues that current literature should address anew or address differently.

To make sense of organizing options towards standardizing and/or adapting the practices of direct teams, managers use sensemaking processes that rely on differentiation and integration (Luhmann, 2006). From the point of view of organizing collective action, the processes of differentiation/integration are used to solve design problems that entail challenges of coordination and cooperation (Paranam et al., 2012). Managers must interpret the environment to understand what is similar and should be addressed with a familiar response (replication) and what is different and needs to be addressed with a novel response (adaptation). In this sense, they look at teams operating in different geographies to find differences and integrate them with interpretive frames to decide what, where, when, and

how, organizational elements should be repeated/standardized and changed/adapted. They use cognitive and emotional processes to interpret the environment (Maitlis & Christianson, 2014) and, although creating an analytical distance to build conceptual scenarios and compare options, they do not act from the outside (Luhmann, 2013; Weick, 1979). In this sense, to understand the similarities and differences in the environment, managers also bring similarity and difference to life (enact environments). The first study explores how they enact similarity and difference in terms of interpretive frames in the work environment.

Sensemaking has become an important topic in organization studies and is usually defined as the process through which people work to understand issues or events that are novel, ambiguous, confusing, or in some other way violate expectations (Maitlis & Christianson, 2014). In this sense, sensemaking is considered episodic, but some authors consider that all situations bear an aspect of novelty, and thus sensemaking can be considered an ongoing process through which people and society continuously organize their worlds through thoughts and words (Weick, 2012; Weick, Sutcliffe, & Obstfeld, 2005; Luhmann, 2013). Sensemaking can be seen as bracketing or actualization of forms from noise, figures from frames, events from flux, or possibilities from horizons. It entails a selection of something from something else and links the selection rules to the past experiences of selecting (Weick, 1979; Luhmann, 2013). This is mostly done unconsciously, but the selection process may be interrupted in moments of surprise and disappointment (when previous expectations are not met), and this causes breakdowns in the ongoing sensemaking process. When trying to interpret dualities with linear interpretive frames, managers can feel this break (Smith & Lewis, 2011; Ptunam et al., 2016), a process explored in the second study.

Managers with responsibility over the work of teams and processes across the globe face high complexity, regular travelling and boundary spanning (Bartlett & Ghoshal, 2003;

Mendenhall et al., 2012). Their sensemaking processes cannot refer to one familiar site with familiar individuals and objects, one distinct body of knowledge, and one language and meaning structure. The work environment of these managers may not coincide in space, time or interpretive frames with the environment of their teams. Some researchers suggest that some people (and some collectives) are able to transcend their previous set of interpretive frames and transform their way of be(hav)ing (Gupta & Govindarajan, 2002). This gives them an advantage when organizing collective action, because they are more effective at interpreting (differentiating/integrating) and interacting with collectives that use interpretive frames that are unfamiliar to them (Bartlett & Ghoshal, 2003). Using the construct of "global mindset" the literature explains the importance of an openness to and articulation of multiple cultural and strategic realities on both global and local levels, and the cognitive ability to differentiate/integrate across this multiplicity (Levy, Beechler, Taylor, & Boyacigiller, 2007; Story, Barbuto, Luthans, & Bovaird, 2014). Global mindset may be used by managers to individually make sense of possible organizing options, and the second study reflects on how research at this level can be enriched by interdependent perspectives on dualities.

The building blocks of this individual level construct can be found in the literature on dualities but are studied separatly. Dynamic equilibrium models of organizing distinguish between latent and salient tensions, and propose individual and organizational factors that can spur virtuous or vicious cycles of management (Hargrave & Van de Ven, 2017; Smith & Lewis, 2011; Tsoukas & Cunha, 2017). These factors may help in understanding of the interrelations among opposite options, find synergies in the opposition, and/or transcend it (Putnam et al., 2016; Fairhurst et al., 2016; Smith et al., 2017). Individual factors that contribute to this type of management are cognitive and behavioral complexity (Denison, Hooijberg, & Quinn, 1995) and emotional equanimity (Smith & Lewis, 2011). Several constructs have been said to build from these factors, such as differentiating and integrating,

reframing and transcending, paradoxical thinking, paradoxical vision, and ambidexterity (Putnam et al., 2016).

Understanding how managers cope individually with organizing dualities is important but is not the whole story, because these dualities entail options about configurations of collective actions. Collective action can be organized with different mechanisms, among which the enactment of interpretive frames in the work environment and the routinization of actions. Interpretive frames are used by managers and teams when organizing work through the use of frameworks and tools that refer to specific words or behaviors (Cornelisson & Werner, 2014; Luhmann, 2013; Weick, 1979). Managers enact interpretive frames when organizing the work of their teams and in this way lead them to replicate and/or change their actions. The first study explores this phenomenon. Routines are clusters of actions that have been studied as important coordination mechanisms in the context of standardization/adaptation, but usually the duality is addressed by separating actions in time and/or space (Bartlett & Ghoshal, 2002). This shows a tendency in the international business literature to follow contingent views on duality management. Interdependence views that search for synergies and balancing acts to manage dualities are only now starting to look at how routinized actions can address dual demands and have not made contributions to the literature on international management. The third study contributes to this research.

2.3. TRANSFORMING INDIVIDUALS AND COLLECTIVES TO INCREASE THEIR ABILITY TO ADDRESS DUALITIES

Organizing is rarely a challenge that starts from a blank state, and all organizing agents (managers and collectives) transform when (re)organizing (Tsoukas & Chia, 2002; Weick, 1979). The question that guides this dissertation entails issues of transformation at

individual and collective levels: how managers change the sensemaking processes that allow

them to cope with dualities, and how collective action can be changed to address dualities.

The articles observe different aspects of change and transformation. The first article is not

explicit about processes of change but also explains enactment and interplay of interpretive

frames in interactions, which are ultimately questions of change. The second and third

articles are concerned with change over long periods of time. The second emphasizes the

development of sensemaking structures at individual level to explain how managers change

their interpretations of dualities. The subjects in this study had different experiences over

time, and thus also changed in different ways. The study carves out stages, but they do not

necessarily mean moments that happen in a specific clock-time nor following the same

rhythm of development. The third article follows a business unit for a five years period to

understand how collective action changed to address dualities.

International management research mostly uses etic perspectives and variance models

to explain change. Individuals and collectives are seen as entities, variables are carved out in

specific moments in time, and an arrow from previous to subsequent connects the antecedents

and the consequents that statistically correlate with the focus variable (Langley, 1999).

Regarding the development of global mindset, for instance, research has been directed to find

the antecedents in the personal characteristics of managers, number of cross-cultural

interactions, exposure to cultural diversity, cross-cultural training and exposure to high

complexity experiences (Story et al., 2014). Many of the antecedents have a temporal

dimension, in the sense that they translate age, tenure, or number of experiences that provided

exposure to certain events. Process perspectives are more interested in how the impermanent

becomes temporarily clustered and seems permanent to actors. The issue of

reorganizing/changing becomes an issue of how people build recurrence into portions of

ongoing experience by means of texts, conversations, and interdependent activity (Weick, 2009).

Change can only be explained in relation to structures – something has to present itself in different states or levels for one to see 'change' – but this does not mean that structures are frozen (Luhmann, 2013). Nevertheless, to engage readers in the narrative, reasonings about change and transformation are usually also explained by following an arrow that connects a sequence of freezing-unfreezing-freezing events, because this is how human beings talk about it (Weick, 2009). Researchers explain change with reference to stabilized patterns (states, identities, or structures) by selecting some dimensions on which they observe differences over time. To overcome descriptions of linear moves through time they use circular descriptions to introduce the notion of recursiveness. For analytical purposes, the dissertation also uses these subterfuges, but it is important to clarify that in the world of complex systems, change is neither linear nor circular, but instead represents the loss of symmetry over a myriad of otherwise possible events, which do not happen at the same time or in a specific event that can be neatly carved out from the flow of events (Luhmann, 2013).

Transformation over time can be explained with teleological processes, which require the existence of intentional agents, or evolutionary processes, which even recognizing intentionality at some levels, draw on selectionism to explain change (Luhmann, 2013). Selectionism argues that the basic structure of explanations of biological evolution by natural selection carries over to explanations of sociocultural change (Schatzki, 2002). This mechanism has been applied in sensemaking theories that see meaning emerging from ecological change, variation, selection and retention/reproduction (Weick, 2009; Luhmann, 2013). This view is also taken in research about routines and networks of routines, in which a comprehensive evolutionary model explores how the mechanisms of variation, retention and selection are necessary and sufficient to explain change in and between routines (Kremser &

Schreyögg, 2016; Parmigiani & Howard-Grenville, 2011). These views are honored by observing change with no presumption of intentionality, but also by identifying intentionality when it may have played a role in a transformation or development processes. The role of managers as organizing agents is in fact a combination of intentionality and co-evolution (Weick, 1979).

Talking about change always entails a question of time, but time does not always translate in the same way for different subjects (Kurnish, Bartunek, Mueller, & Huy, 2017). This is a rarely discussed question when building theory and time is usually taken as continuous (sometimes objectively measurable) lines from past to future (Langley et al., 2013). An increasing number of scholars have examined the phenomenon of time and defied the conventions of clock-time (Crossan, Cunha, Vera, & Cunha, 2005). Process studies focus attention on how and why things emerge, develop, grow, or terminate over time, and describe the process of change as a "sequence of moves" but they do not necessarily understand time as clock-time (Langley et al., 2013). The studies presented in this dissertation refer to moments and events, but they do not happen in a specific clock-time nor follow a specific rhythm and are built from memories of subjects that already condensed experiences into narratives (which are anchored in dates interpreted as they see them in a self-temporal line) (Van Manen, 2014).

CHAPTER 3. SUMMARY OF METHODOLOGY

3.1. EPISTEMOLOGY

Following a process ontology but aiming to establish a dialogue with different theoretical fields, this dissertation follows an emic approach and develops three studies to explore how managers organize collective action. Each study was inspired by a different question and takes a different observation point. To some researchers, different theoretical perspectives should not be integrated to construct knowledge, as they have different underlying assumptions, but the dissertation follows the argument that at a higher level of abstraction they can and should talk to each other (Luhmann, 2013). My intention is to bring more comprehensive views on how managers rely on cognition, communication, and action, to organize the collective actions of their teams, and recursively, how this organizing process influences them as cognitive, communicative, and action systems. Aiming for practical rationality (Sandberg & Tsoukas, 2011), the investigation builds on the interplay among different theories. All studies are exploratory in the sense that they do not want to exploit existent theories and address their specific gaps, but instead open new questions by looking at blind spots that current theories are not considering (Stebbins, 2001).

The choice of methods is constrained by the different research questions and by the features of the research context (Silverman, 2013). Although the interactive, emergent, and evolving aspects of organizing are difficult to observe and capture as they unfold in all types of context, the decoupling of spaces in terms of decision-making and action, the fast pace of change, and the use of different languages and meaning processes to support manager-team interactions bring increasing difficulty to research in international/global contexts (Czarniawska, 2008). The studies rely on interviews, historical documents, and observations

in different spaces and times, to explore different but interplaying phenomena with inductive reasoning. These qualitative methodologies have been called to complement research on international business contexts (Birkinshaw et al., 2011) and are well suited to examine the issues from the perspective of the participants and to bring context to research observations (Weick, 2012).

The problem of organizing actions is taken in all studies as a problem of differentiation and integration that occurs in the intersection of systems with their environments (Luhman, 2013; Weick, 1979). To understand how managers organize collective action is, thus, to understand how they interpret and interact with the environments in which different forms of organized collectives (such as teams and routines) are their focal point of interest. The first two studies explore this issue from the perspective of the manager. The first uses a cross-individual analysis to identify commonalities and differences in the way several managers enact their environments, and the second takes a longitudinal perspective to understand how the sensemaking processes that drive this enactment change over time. The last study takes the perspective of the collective to explore configurations that managers can use to organize actions to achieve dual demands.

3.2. METHODOLOGY USED TO STUDY SENSEMAKING AND ENACTMENT

Sensemaking studies follow process ontologies but also used phenomenology (Holt & Sandberg, 2011; Van Manen, 2014) and systems theory to build a field of research known as ethnomethodology (Tsoukas & Chia, 2002). Phenomenology's aim is to uncover the basic structures of the lived experience of men, to understand how events appear connected and enact different worlds for human beings (Van Manen, 2014). Systems theory is brought as a way of thinking on how different experiences connect at different levels and produce the

world (Rousseau, 1985). Rules that apply to understanding biological systems are also used to understand how social systems operate. The word "system" is used to combine processes and structures into one same phenomenon (Luhmann, 2013). Inspired by these views, sensemaking studies collect data from human beings (usually through in-depth interviews) to understand how they construct meaning from abstractions (people build expectations that transcend each particular moment) and triggering (people are intrinsically connected and thus sensitive to their environments); and/or observe events, to understand the ecological aspect of meaning (how everything is constructed and co-evolves with everything in interaction). They combine insights from ethnography with interpretive methods, dissolving the boundary between the organized and the organizer, between the observed and the observer, and between interpretation and action (Weick, 1979). In this sense, the interpretations of the research subjects are introduced in the analysis as valuable voices and the analysis is considered an interplay between many participants. Sensemaking is approached from a relational perspective, thus seen as organizing processes that intrinsically connect men and environment.

The first two studies explore sensemaking processes and rely heavily on interviews with managers, complemented with observations of interactions of managers with teams. The sixteen in-depth interviews used to collect data in the first study were also used to collect data for the second, although each study extracts data from different questions. The first study uses phenomenological insights in the interviewing technique, using questions that aim to understand the commonalities among the living experiences of managers in terms of how they interpret and enact their environment, and coding procedures to uncover the processes used by managers to enact environments (Gioia, Corley, & Hamilton, 2013; Langley & Abdallah, 2011). The second uses questions about how they understood their organizing responsibilities over time and uses narrative analysis to carve out moments in time and

uncover the mechanisms that lead managers from one moment to the next (Langley, 1999).

The sampling process in both studies followed a snowball technique. Data analysis began

during data collection and followed a recursive hermeneutic process-oriented perspective in

both studies (Langley, 1999; Rennie, 2012).

3.3. METHODOLOGY USED TO STUDY NETWORKS OF ROUTINES

The purpose of the third study was to build theory on how behavior can be organized

to address dualities, by conducting a longitudinal inductive study of one business unit's

transformation over a period of five years (2012-2016). The business unit ("ITServ")

transformed from a local unit operating with 50 employees to a global network operating with

600 employees and a vast network of external partners. Its top management team entailed a

significant reflection about identity, structure, and processes, which increased the traceability

of changes in rhetorical practices and routines. Although changes were observed in many

routines, the study uses "recruiting" to illustrate how a routine evolved in its network

(Kremser & Schreyögg, 2016). Data collection combined semi-structured interviews to

internal and external informants, on-field observations during a period of 18 months, and

historical documents. Data collection and analysis were progressively focused on the research

question (Sinkovics & Afoldi, 2012), and data analysis involved formalized steps of (i)

organizing narrative moments, (ii) coding (data reduction), and (iii) modelling and

interpretation (Gioia et al., 2013; Langley & Abdallah, 2011). The external informants were

mainly used to understand changes in the routine that might be connected to overall trends in

human resources practices and thus should not contribute to the analysis. To facilitate

transparency in the dialogue between researcher and textual data and thus improve reliability,

validity, and confirmability of the inductive process, coding procedures were supported by

CAQDAS (N'Vivo software). These analytical strategies helped us cross-tabulate three narrative moments (Langley, 1999) with a data structure consisting of first-order concepts, second-order constructs, and aggregate themes (Gioia at al., 2013).

CHAPTER 4. ORGANIZING AS ENACTMENT OF CONTEXT[7]

4.1. ABSTRACT

Sensemaking relies on interpretive frames that can be considered manifestations of culture. Global managers cope with multiplicity and flux in the business context, thus with the co-existence and co-evolution of different frames. In current theories, these contextual features seem to influence all manager-team interactions. With an inductive study we show how managers enact different forms of multiplicity and flux in the work environment, and found that enactments depend on sensemaking processes and socio-material conditions. We contribute to discussions on context and culture in global management, complementing theories on the role of "national culture" and "cultural fit" in the global work environment.

Keywords: Sensemaking; Framing; Global management; Culture; Work environment

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[7] This chapter reproduces the latest version of a co-authored paper that received valuable contributions from Editors and anonymous reviewers (see Note 2), to whom I am grateful.

4.2. INTRODUCTION

Organizations rely on interactions imbued with meanings. Meanings rely on individual and collective sensemaking processes, which include the framing of concrete life experiences on conceptual schemas ("interpretive frames") acquired through work and life (Cornelissen & Werner, 2014; Dewulf, Gray, Putnam, Lewicki, Aarts, Bouwen, & van Woerkum, 2009; Maitlis & Christianson, 2014; Luhmann, 2013; Sandberg & Tsoukas, 2014; Weick, 1979) and that co-evolve with culture (Cousins, 2014). Cognitive frames act as filters to individualized interpretation and are tightly coupled with discursive frames that act as filters in collective sensemaking processes, creating patterns of activation that are studied as meaning systems ("cultures") shared by groups, organizations, and nations (Giorgi, Lockwood, & Glynn, 2015). When managers and teams work in environments dominated by one culture, work can be organized through shared understandings about goals, processes, and responsibilities, because the discursive frames and practices used in the work environment are tightly coupled with their cognitive frames. They reach workable certainty (Weick, 2009) by using concepts and schemas that are familiar to all. When working in global contexts, however, managers interact with teams in different environments, which are prone to activate interpretive frames that are not familiar to all participants or that generate different understandings for each participant. To reach workable certainty, managers and teams may activate conflicting frames in the environment, in the sense that divergent interpretations compete for a place in collective sensemaking events (Dewulf et al., 2009).

Global management literature is alert to this phenomenon and explains it by seeing the different interpretive frames as manifestations of different cultures in the global context (Caprar, Devinney, Kirkman, & Caligiuri, 2015; Devinney & Hohberger, 2017). The co-existence and fast evolution of frames and practices in the global context is explained in terms of "multiplicity" and "flux" (Mendenhall, Reiche, Bird, & Osland, 2012), which refer

to the way managers get in touch with dissimilar interpretations and practices, and to the way these may change at a fast pace. However, the dominant perspectives on "context" as something separated from the actors, the overemphasis on the role of national culture as the grand influencer of context, and the search for the drivers of success in this context in the fit of individual characteristics of managers ("traits") with cultural dimensions, may be preventing a comprehensive understanding of how interpretive frames are brought alive and interplay in global work environments (Burns, Nieminen, Kotrba, & Denison, 2014; Caprar et al., 2015; Devinney & Hohberger, 2017; Osland, Bird, & Oddou, 2012).

Management research has been influenced by different ontological perspectives, as some researchers see a world made of things (or stable structures) in which processes represent change in things/structures; and others see a world of processes, in which things/structures represent temporary clusters of events/processes (Tsoukas & Chia, 2011). We believe that the understanding of global management challenges can benefit from integrating insights from both perspectives, but current research has mostly followed the first perspective. Comparative and intercultural studies demonstrate differences in expectations and behaviors of entities (managers, employees, teams, and organizations) operating across cultures (Brannen & Doz, 2010; Dorfman, Javidan, Hanges, Dastmalchian, & House, 2012) and consider "national culture" as a social structure that heavily influences the interpretive frames used by organizational actors and that can be described in terms of stabilized dimensions (Devinney & Hohberger, 2017). This perspective can overlook important dynamics that connect managers and teams in the global context, by overemphasizing or oversimplifying the role of national culture in the work environment (Caprar et al., 2015; Giorgi, et al., 2015; Osland & Bird, 2000; Tung & Verbeke, 2010). Sensemaking theories discussed under process perspectives are important to understand these dynamics but have been underappreciated by empirical research in the global context.

Both managers and teams influence the activation of interpretive frames in work environments (Maitlis & Christianson, 2014), but there is an important asymmetry that bends the organizing power toward managers. As such, the way managers perceive the existence of divergent frames competing for interpretation influences collective sensemaking processes. To extend theory on how interpretive frames interplay in global work environments, we thus focus on the role of managers as organizers of work, and build our study from sensemaking perspectives that use the concepts of "enactment" (Weick, 1979) and "partial activation" (Luhmann, 2013) to complement explanations on the relationships of culture, frames, and environment. They allow us to investigate how managers perceive the context for interactions with teams, and question the prevailing theories that see contextual features tightly associated with cultural dimensions that endure from interaction to interaction. We thus follow research that seeks to clarify the influence of the global context in managerial work (Mendenhall et al., 2012; Osland et al., 2012) but go further to separate descriptions of the business context from descriptions of the context that is enacted as the background for interactions with teams. These earlier studies on context identify dimensions of multiplicity and flux in the perceptions of managers about context, and so we ask: *how do managers enact multiplicity and flux in the global work environment?*

To answer this question we conducted an inductive study in which our primary data are the narratives and first-order concepts of 16 successful global managers, complemented with direct observation of manager-team interactions, and secondary document analysis. We found that all managers working in the global context see the business context fragmented by cultures, but do not always see that fragmentation manifested in work experiences. Moreover, we show that some see the fragmentation as a constraint to collective sensemaking while others see it as an opportunity to expand and transform shared meanings toward more effective performances. These perceptions were grouped in four patterns that balance

different enactments of multiplicity and flux, and depend on socio-material aspects of the environment.

The contributions of this paper are both theoretical and practical. From a theoretical point, we bring a view of managers as enacters of environments, challenging the way "context" is used currently in management research and opening new avenues for research in the interplay of entity and process-based theories (Tsoukas & Chia, 2011). This focus is important to move away from the limitations of research that tends to overweight the impact of stable national cultures and personal traits as a background for manager-team interactions in global contexts (Devinney & Hohberger, 2017). From a practical stand, we make contributions to managers' development and human resources strategies in global organizations.

4.3. SENSEMAKING IN GLOBAL CONTEXTS

Sensemaking is a process of organizing that involves turning circumstances into a situation that is comprehended explicitly in words and that serves as a springboard into action (Weick, Sutcliffe, & Obstfeld, 2005). It aims to reduce uncertainty in the environment and entails operations of scanning, distinction, and framing (Luhmann, 2013; Goffman, 1974). Framing processes operate as filters through which experiences are interpreted to build meaning through cognition and communication. They allow managers and teams to match lived/situated experiences with conceptual schemas and models (interpretive frames) that were previously organized in thoughts and discourse (Weick, 1979). Social interactions may tightly couple interpretive frames in cognitive and discursive processes, in such a way that they form patterns of activation that are seen as larger meaning systems ("cultures"), or in other words, mind co-evolves with culture (Cousins, 2014). The co-evolution depends on

situated interactions, and certain cognitive and discursive frames might therefore be

constructed in different ways by individual and collective actors that have different

experiences of interaction. In this sense, the same situation might be interpreted in different

ways by actors that activate different cognitive frames. When actors instantiate these

differences through discursive practices, they may also activate divergent frames in the

situation. By extending the scope and increasing the speed of communication and travelling,

global work increases the chance that divergent interpretive frames manifest simultaneously

in a shared space or persist through intertwined events in the same time narrative. This

happens because the global context may bring situational clues that are unfamiliar to

individuals or that bear a different meaning in that particular context. Individuals might not

be able to match the clue to an interpretive frame (no meaning is created or the clue might get

unnoticed) or, if they do, they may create meanings that are not appropriate in the situation,

which might create confusion and ambiguity. When interactions activate divergent

possibilities to interpretation, part of the sensemaking process may thus be the selection of

the frame(s) that is/are to be used, which depends on the expectations of the actors and on the

dynamics of intertwined interactions, which create expected backgrounds for subsequent

interactions (Luhmann, 2013; Weick, 1979).

Humans are socialized through sets of values, stories, toolkits, and categories, that can

cluster together and build collective meaning systems studied as "culture" (Giorgi et al.,

2015; Luhmann, 2013). Elements that bundle together through socialization processes tend to

be activated together in situations in which similar socio-material clues manifest, and thus

"culture" can manifest through patterns of interpretation used in interactions that happen in

familiar sites or are related with familiar conversations. In management research, this has

been studied, for instance, at the level of professions, teamwork, organizations, and nations.

The process through which these collective meaning systems co-evolve with individual

interpretive frames is controversial, but there is evidence that they co-evolve (Cousins, 2014).

Global management research is mostly concerned with the way individuals born and raised in

geographic and institutional proximity are socialized in similar ways, thus with "national

culture", and with the way that different national cultures fragment the business practices and

the work environment (Bird & Mendenhall, 2016; Devinney & Hohberger, 2017). The global

context is differentiated from the local context, which is usually characterized as a familiar

site with familiar individuals, artifacts, and social orders, one distinct body of knowledge, or

one language and meaning structure. The literature relates "global" with increased

complexity, which comes from the co-existence and interdependence of more and different

clusters of interpretive frames, and constant change in the environment (Mendenhall et al.,

2012). In the global context, managers and teams will activate interpretive frames that

produce similar meanings (reach workable certainty), but they will most probably interact

with other actors who were socialized with dissimilar frames, and thus might activate

interpretive frames that produce divergent meanings (do not reach workable certainty).

Despite their concern for the interplay of interpretive frames (both at cognitive and

discursive levels) as a pervasive dynamic in social interactions, theories of culture can

oversimplify this issue with explanations that rely on stable hierarchies of frames or linear

development of framing processes (Devinney & Hohberger, 2017; Tung & Verbeke, 2010).

Global management literature usually considers that "national culture" manifests through the

activation of clusters of interpretive frames and thus individuals from different national

cultures will tend to activate different interpretive frames. Moreover, while it admits that

national culture might not be the only influencer of interpretive frames and that it mixes with

other cultural systems, it can still be identified in the way individuals and groups make sense

of situations. Thus, national culture is an aggregator of frames whose impact over

sensemaking can be isolated from the impact of other cultural clusters (Dorfman et al., 2012;

Gelfand, Erez, & Aycan, 2007; Hofstede, 1994). This literature describes the way national

cultures produce frames (discursive and cognitive filters) that organizational actors use in

their interactions (Dorfman, et al., 2012; Hofstede, 1994), and the individual abilities that

facilitate or hinder intercultural interactions (Caligiuri & Tarique, 2012; Thomas, Elron,

Stahl, Ekelund, Ravlin, Cerdin, Poelmans, Brislin, Pekerti, Aycan, Maznevski, Au, &

Lazarova, 2008).

Two important limitations have been identified in this research (Devinney &

Hohberger, 2017). First, an overemphasis on the role of national culture (taken as a stabilized

social system) to explain how managers and teams work together, neglecting the complex

interplay of interpretive frames associated with many socialization processes. Second, an

overemphasis on the "fit" of interpretive frames used by managers and by teams as a driver

for success in interactions. Calls for more complex and dynamic understandings on the role

of national culture have been made (Devinney & Hohberger, 2017; Tung & Verbeke, 2010)

and we contend that sensemaking theory can add important insights to overcome current

limitations, as it indicates that looking at individual and social structures as stable constructs,

and how they fit each other, is insufficient to understand how they organize experiences and,

ultimately, collective action.

Theories of sensemaking explain how meanings are constructed at the individual

(subjective) and collective (social) levels (Sandberg & Tsoukas, 2015; Maitlis &

Christianson, 2014). At the individual level, sensemaking involves conscious and

unconscious cognitive and emotional mechanisms, activated by biological processes (Maitlis

& Christianson, 2014). At the social level it can be seen from two perspectives. The first

elaborates on how intersubjective meaning is co-created by individuals, and it thus sees

meaning arising from different cognitive beings seeking consensus (Maitlis & Christianson,

2014). These cognitive beings use their internal sensemaking structures (stabilized clusters of

interpretive frames) in interactions, so the way they fit each other is important to meaning construction, which is achieved with processes of influence and negotiation, in which cognitive frames may compete for a dominant place in building discourse. The second describes an emergent and unpredictable order, in which the actors are not distinctive selves but dynamic relationships (Weick, 1979) or self-reproducing communication processes (Luhmann, 2013). Under this perspective the interplay of interpretive frames is mainly attributed to the social realm, in which discursive frames compete to influence cognitive frames. The fit among interpretive frames organized in individual and social structures may be a facilitator, but the key to meaning construction is the way the interaction brings the frames into existence and sets them in action. Global management research has mainly followed the first perspective, emphasizing the way individuals carry interpretive structures from interaction to interaction, thus mostly concerned with the fit among previously built structures. This perspective makes it difficult to explain why "national culture" seems to influence some but not all interactions.

In this study we searched for explanations in the concepts of "enactment" and "partial activation" brought by sensemaking theories. Enactment was introduced by Weick (1979) to explain the relationship of actors and environments, and refers to reciprocal exchanges established between them in ongoing processes that use already established interpretive frames but at the same time transform them (Weick, Sutcliffe, & Obstfled, 2005). The mechanism that connects actors and environments is ecological. In a recursive relationship: changes in environments trigger the attention of actors (socio-material clues) and activate interpretive frames (concepts, schemas, models) that were previously built in connection with similar clues; actors use these interpretive frames to understand the changes in the environment and to take action; these actions change the environment and thus trigger the attention of actors. In this process, interpretive frames co-evolve with environments and if

actors tend to interact in similar environments, they create patterns of interpretation that facilitate subsequent interactions. This concept emphasizes that the relationships among actors aiming to reach workable certainty does not happen directly between them, but primarily between each actor and the perceived environment, in which other actors are present. Enactment is an "inside job" casted by actors as creators of the contexts they cope with (Gioia, 2006).

Partial activation is used in Luhmann's theory to explain how structures and processes are two faces of intertwined dynamics (Luhmman, 2013). The world is not made from micro-parts (individuals) that vertically combine to form macro-parts (collectives), but from events in which co-evolving systems form each other's environment. As social systems, cultures have both static and dynamic properties (Luhmann, 2013), as they entail recognizable patterns of activation of interpretive frames across different situations (it is possible to observe that some schemas and concepts are usually activated together), but are never activated in their fullness (each situation grants salience to some schemas and concepts, but never to all schemas associated with a culture). Theoretical explanations for patterns that seem to hold from interaction to interaction (manifestations of structures that seem to activate together, such as "culture" or "personality") should be searched in the processes that connect interactions (such as decisions in organizations that establish the need for subsequent decisions). Each interaction can activate different clusters of interpretive frames and will influence the activation in subsequent interactions. In this sense, there is ground to defend that manager and team can create work dynamics that tend to replicate patterns of interpretation, but the contrary is also true, in that they can create environments that constantly produce new dynamics. Partial activation implies that certain manifestations of cultural dimensions are selected over others (the selection is mostly unconscious and depends on the configuration of each situation) and, when activated in the same situation/narrative,

different interpretive frames may compete for places in collective meaning construction. In other words, social systems that we analyze as national, organizational, or professional cultures, are always in the making in concrete situations that partially activate their elements, and may intertwine by borrowing and mixing elements among them (Luhmman, 2013).

To these perspectives, the emphasis on how structures fit each other is limitative, because it assumes that individual actors carry a set of stable interpretive frames (recognizable as "traits") from interaction to interaction; that entire sets of interpretive frames are activated to match entire sets of frames developed by other actors; and that sets of interpretive frames developed by actors are influenced by stabilized cultural elements that can be segregated from other elements (recognizable as cultural "dimensions"). Using the mechanism of tight/loose coupling in networks of interpretive frames (Orton & Weick, 1990), instead of assuming a strong mechanism that glues frames with cultural dimensions, offers the possibility to build more dynamic explanations of how interpretive frames are enacted in interactions, and competes for a place in collective sensemaking. Interpretive frames seem tightly coupled and are usually activated together because humans tend to interact with a few other humans that tend to activate familiar frames. Tendency toward familiarity should not, however, be mistaken for a structural constraint. In the international context, familiarity might not work as a determinant of activation, and thus actors may experience the environment differently, even when they are interacting with each other. Because global management research tends to emphasize the impact of the tight coupling of cognitive and discursive frames with dimensions of national culture (over the coupling with other cultural clusters), our current understanding of the different arrangements and evolution of interpretive frames in the work environment is limited.

As long as organizational actors can proceed in their moves and conversations with a workable certainty (Weick, 2009), they usually activate familiar interpretive frames with no

explicit reference to the cultural clusters to which they are tightly coupled (Luhmann, 2006). When different frames are simultaneously activated to make sense of organizational life and produce divergent meanings, actors can continue the interaction unaware of the divergence, or they can become aware of the divergence. These situations can trigger processes of collective meaning construction until workable certainty is reached again. These processes may entail more complex negotiations in the sense that actors might need to frame meanings in a different way (Putnam, 2010). Although managers and teams influence each other in these collective sensemaking events, this influence process is not symmetrical, as organizations are mostly decision-making systems that organize collective action in hierarchical ways (Luhmann, 2013).

Hierarchy amplifies the impact of the managers' decisions (or indecisions) and discourse, but at the same time can separate them from most of the sensemaking events in which teams negotiate meanings. Earlier studies report that the collective sensemaking process may unfold in distinct forms, depending on the degree to which leaders and stakeholders try to influence one another, and that unitary accounts and consistent action tend to emerge when leaders and stakeholders try to influence each other's interpretations (Maitlis, 2005; Maitlis & Christianson, 2014). This suggests that the manager-team interplay can create (but not necessarily lead to) shared interpretive frames in the work environment and that the manager's high engagement in this process is especially important to consolidate these frames. However, our understanding of how managers perceive the global work environment in terms of interpretive frames and how they work toward the construction of consensus or conflict is still limited. This is the focus of our exploratory study.

4.4. METHOD

Deciding how to study sensemaking processes in global contexts is a challenge, as the interactive, emergent, and evolving aspects of meaning negotiation between managers and teams are difficult (if not impossible) to observe and capture as they unfold (Czarniawska, 2008; Maitlis & Christianson, 2014). Research on global management must observe sites that are geographically dispersed, but even if researchers were to become the global managers' shadows, they would not be able to understand the different languages and see the cultural differences in their interactions. Researchers must therefore rely on observation and interpretation from the managers themselves. Qualitative methodologies are well suited to the study of dynamic processes comprising individuals' interpretations, as they examine the issues from the perspective of the participants, rather than from that of the researcher (Weick, 2012; Gioia, Corley, & Hamilton, 2013).

Data collection followed a phenomenological perspective (Van Manen, 2014), as we sought to understand the living experiences of managers when interacting with teams in global work environments. We used data from in-depth interviews with global managers that are considered successful in their roles by their organizations, complemented by direct observations of team meetings and formal and informal interactions of managers and teams, as well as analysis of secondary written data. The managers were selected when their formal position in an organization comprised international accountability (they are responsible for actions and outcomes that occur in different countries), and we looked for different international work experience measured in years, different business environments (large multinationals, born global and local companies with internationalized branches), and diverse industries. Success was determined by the existence of a promotion in the last two years (from CV analysis). Our aim was to identify potential common themes underlying the processes used by different managers to identify and make sense of divergent interpretive

frames in different work environments, focusing specifically on how they clustered the differences and inferred their connection with national culture.

The sampling process followed a snowball technique. Prior to the main interviews and observations, we conducted short informal interviews with experts in the field of global management (three academics and two coaches that work with global managers) and sojourners (five managers with short international experience but that did not have a global management role and five self-expatriate employees, from personal connections of one of the researchers that has previous experience as an expatriated manager in a global company) to provide concepts and personal stories that helped to prepare for open dialogues with the participants. We asked them to name known individuals with global management roles and different organizational and professional experiences who could be candidates for in-depth interviewing. From this first list, with more than 100 names, we used the candidates' public profile in a professional social network (LinkedIn) to better understand their role and context, and selected five names with different experiences and with a promotion in the last year (a proxy of success in their role). Following the interviews, we asked the interviewees to nominate other individuals with similar challenges and progress. We continued the interviews until the data reached a manageable quantity and conceptual saturation. This occurred with 15 interviews, and we performed one more to ensure that the subsequent analysis did not reveal new concepts to our emergent theorization. To increase the communicative validity of the study and highlight the variation coming from differences other than national culture, subjects have the same nationality as two of the researchers (Portugal). In Table 1 we present a summary of some descriptive data regarding the subject, company, and industry in which their main activity is/was developed.

Table 1. Informant descriptive data (Study 1)

Subject	Age and Gender	Lived in _ countries	Worked in _ countries	Global Role	Company present in _ countries with _ employees	Company's headquarters	Industry
GM1	39 | Female	2 (West Europe)	> 30	Project Manager	67 | 152 000	USA	Food processing
GM2	48 | Male	2 (West/ East Europe)	> 30	Director	51 | 39 000	USA	Retail
GM3	50 | Male	1 (West Europe)	10 – 20	CEO/ Owner	38 | 200	Spain	Logistics
GM4	45 | Male	4 (West Europe/ Asia)	10 – 20	Marketing Manager	217 | 240 000	Korea	Electronics
GM5	53 | Male	2 (West Europe)	10 – 20	CEO	73 | 3 900	Portugal	Technology
GM6	52 | Male	3 (West Europe/ Africa)	5 – 10	Director/ Owner	150 | 210 000	USA	Consulting
GM7	45 | Male	3 (North America/ West EU)	5 – 10	Director	6 | 450	USA	Online services
GM8	38 | Male	1 (West Europe)	4	IT Manager	50 | 140 000	UK	Banking
GM9	36 | Female	1 (West Europe)	1	Project Manager	170 | 379 000	USA	IT Consulting
GM10	40 | Male	3 (West EU/ North America)	3	Operations Manager	180 | 78 000	USA	Pharmaceutical
GM11	65 | Male	4 (South America/ West EU)	5 – 10	CEO 6 countries	150 | 88 000	Switzerland	Pharmaceutical
GM12	56 | Male	3 (West/ East Europe)	5 – 10	CEO	11| 12 000	Spain	Energy
GM13	39 | Male	3 (West/ East Europe)	5 – 10	Marketing Manager	180 | 78 000	USA	Pharmaceutical
GM14	36 | Male	1 (West Europe)	5 – 10	Finance Manager	100 |162 000	Japan	Electronics
GM15	42 | Male	2 (West Europe/ Africa)	4	Project Manager	150 | 210 000	USA	Consulting
GM16	36 | male	3 (West Europe)	5	CEO	3 | 350	Spain	Chemical

Interviews were held directly by the first researcher at the participant's work site (8), via *skypecall* (4), in their homes (2), airport (1), and hotel (1). Sites were chosen according to each participant's convenience, as some are intensive travelers and did not have a work site available. Skypecalls were used according to their suggestion, as this is the regular channel they use to communicate daily with their teams (as they are highly skilled in the use of this technology and felt comfortable using it, we do not expect that the distance brought problems to data collection). The first researcher had previous work experience with similar organizations, which improved the overall credibility with interviewees and facilitated more in-depth communication about the work environment. Interviews had open-ended questions about the overall experience of management and specifically on interactions with teams. They began with an open-ended question on the current and previous experience of the participant: "Can you start by telling me what it is that you do and how you came to do this?". These narratives were used to set the context in which lived experiences were described: "Do(did) you interact with local teams? Can you talk about personal experiences to illustrate what happens(ed) in these interactions?". Follow-up questions were then asked to provide more information on the particular way that the manager conceptualizes her/his work

and context, moves across the world, and communicates with teams. The interviews lasted on average 1.5 hours and were audio-taped, and then transcribed *verbatim*. Observation comments about work sites were added for context. Overall, the raw data amounted to about 460 single spaced written pages.

Data analysis had two stages. We first performed a narrative analysis (Silverman, 2013; Soin & Scheytt, 2006; Riessman, 1993) using the transcripts from interviewees, field notes, and written documents, to understand the variation in the context and experiences between managers. Several turns at reading the extensive raw data allowed us to prepare four typical narratives that describe the way managers experience the context for interactions with teams, which we summarize in the next section. This analysis made us question the way "context" is being used in the global management literature, thus leading us to introduce the concept of "enacted environment" grounded in the empirical data.

In the second stage we focused on the managers' descriptions of concrete experiences when interacting with teams, to perform a thematic analysis with coding procedures. Our primary material was the first-order constructs of the global managers, taken in their own context, which were aggregated according to an interpretation process that followed the hermeneutic cycle and considered the literature review as valuable eductions (Rennie, 2012; Van Manen, 2014). To make the interpretation procedures transparent to the reader, we provide a summary of the coding and aggregation process in Figure 1, using a data display template advanced by Gioia and others (Gioia, et al., 2013; Langley & Abdallah, 2011).

Figure 1. Data Structure Overview (Study 1)
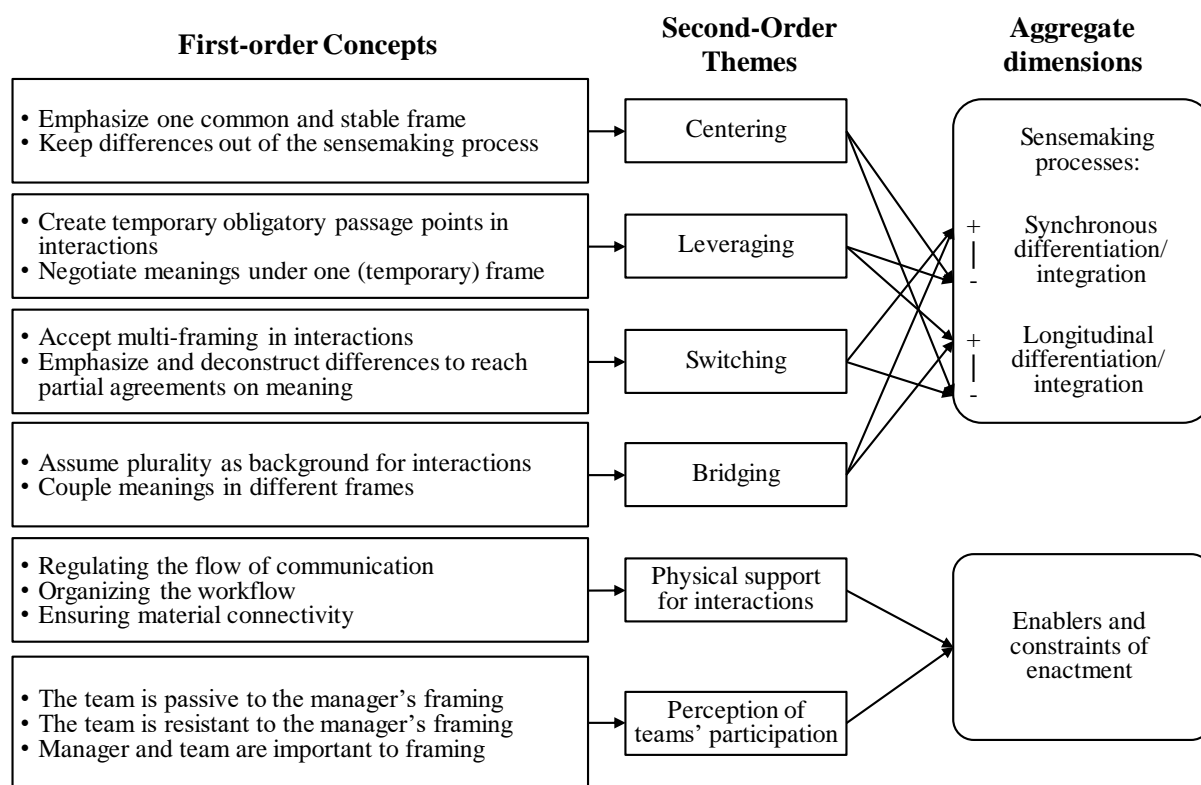
Following earlier qualitative studies based on phenomenology, we sought

communicative, pragmatic, and transgressive validity. Communicative validity, the coherence

between the researchers' interpretation and the empirical material investigated (Sandberg,

2005), was achieved by conducting observations in the offices, using written information

(context of businesses and companies), including subjects that were raised in the same

language/national culture of the researcher, using the previous experience of the first

researcher as a management consultant (to better understand what the managers were saying

during the interviews), and by asking only a few open-ended questions with follow-up

questions, so that the interviewee was not influenced by the researcher or the aim of the

research.

Pragmatic validity, the coherence between what the participants say they do and what

they actually do (Alvesson, 2003), was achieved by observing examples of meetings, work

relations in the offices, making frequent follow-up questions, and by constantly asking for

concrete examples that illustrated the cross-cultural interactions. Transgressive validity,

reducing possible contradictions (Sandberg, & Pinnington, 2009), was achieved by

systematically searching for differences and contradictions rather than looking for coherence

in the managers' accounts.

Reliability as interpretive awareness, how the researchers have controlled and checked

their interpretations throughout the research process (Van Manen, 2015), was achieved by

starting with an open confrontation with the interpretation systems of the researchers,

attending with surprise to variation and complexities in the managers' narratives, capturing

the concepts as they appeared rather than seeking explanations, and treating all aspects as

equally important during the data collection and analysis. Controlling for same nationality of

subjects and first researcher was useful to increase communicative validity, but it could

decrease interpretive awareness. In this sense the discussion with the other researchers was

key to the interpretive process, specifically because one of them is experienced in working

with managers from different nationalities, has a double US-Brazilian nationality, and is

familiar with the Portuguese work culture.

4.5. FINDINGS

4.5.1. The business context is not the background for work-related interactions

The data from document analysis, direct observations, and overall interpretations of

managers reveal that managers see the business context fragmented by cultures and with an

increasing pace of change, but do not always see manifestations of these features in the

context for work-related interactions. Their conceptual descriptions of the business context

are very much in line with the dimensions of multiplicity and flux identified by Mendenhall

and others (2012), but they did not always replicate them in their narratives of concrete experiences with teams. This insight can be explained by sensemaking theories that suggest that contexts are to a certain extent the product of interpretive processes, and that these processes connect concepts with concrete experiences in socio-material worlds (Putnam, 2015; Weick, 1979).

Regardless of the multiplicity and flux (Mendenhall et al., 2012) that they observe in the global business context, managers seem to experience the immediate work environment in a different way. To describe it, they made two distinctions clear in their narratives. First, a distinction between a conceptual business context (used when describing organizing endeavors at strategic level) and a more concrete context in which manager and teams interact (used when describing their concrete experiences with teams) [GM2: "One thing is the business practice… another thing is the environment, the conversation, the negotiation... is it a hostile environment, is it neutral, is it warm?"; GM10: "There are cultural issues that affect business… but in the work with teams I do not feel these differences"]. Second, a distinction between work and non-work interactions [GM8: "There is no such thing as 'global'… we all work locally! Differences between ways of thinking became apparent in the cafeteria, but not when we were working; GM12: "as long as we put ourselves in a professional relationship, the conflict diminishes"]. We honored our subjects' views by establishing an analytical distinction between the environment for interactions that are work related (more formal and professional, according to their own descriptions) and the interactions that happen for other reasons (less formal and non-professional). Although they necessarily influence each other, this allows us to bring more grounded understandings of work environments.

Managers are manager-centric when experiencing the environment, as they cognitively integrate their own concrete experiences. Sensemaking theories suggest with the

concept of "enactment", that the way individuals experience the environment determines their behavior in interactions and creates the environment for subsequent interactions (Weick, 1979). We therefore propose the concept of "enacted environment" to refer to the cluster of rules, discourses, practices, and material elements that are enacted by managers and create the background for work related interactions with teams. To understand the differences between enacted environments in terms of the frames that are used by managers and teams, we started by building four composite narratives from the data, which we summarize in Table 2.

Table 2. Summary of the four narratives describing the experiential work environment (from the managers' perspectives)

Enacted environment	*Summarized narrative describing the enacted environment*	*Central features mentioned by global managers*, observed on site and/or document analysis*
Standardized	Global and local practices have common ends and are organized with the same set of rules and understandings. The worksites, although in different places, have a similar design and activities follow similar paths. Manager and team, even when from different countries, use shared sensemaking processes in their interactions, built on organizational, professional, and functional frames.	• Central plan and tight control (GM1, 9) • Shared tools (GM1, 9, 15) • Standardized processes (GM1, 8, 10, 14) • Writen behavioral procedures (GM1, 9) • Similar design (GM8, 9, 10, 14, 15)
Patched	Global and local practices are coordinated through a structure of business objectives, but otherwise disconnected in terms of space, time, material design, and rules. Manager and teams use different languages and sensemaking frames in their interactions, built from both local practices and global professional and functional frames. Equity investment, reporting activities, and global manager role may be the only connection between global and local practices.	• Multiple worksites following local rules (GM2,11) • Central reporting but high autonomy of local managers and teams (GM5, 11, 12) • Different sensemaking frames connected to different cultures (GM2, 11, 16) • Different physical environments (GM2, 11)
Virtual	Global practices exist apart from local practices and are materialized in virtual and ephemeral project-based activities, detached from formal hierarchies. Interactions are almost all mediated by technology, live encounters are rare and to fulfil particular objectives (workshops, brainstorming). Sensemaking frames (organizational, functional, or project-based) are created centrally and language is simplified in interactions. Paths are dictated by technological requirements (more sequential, linear).	• Virtual, ephemeral hierarchies (GM8, 9) • Project-based procedures manual (GM1, 9) • Communication based primarily on technology (GM1, 9, 10, 13, 15) • Rare live encounters with teams, sometimes none during the project (GM1, 8, 9) • Virtual practice detached from local practices (GM8,9)
Stretching	Global practices are recent (last 5 years) but growing very quickly. Local practices are being created by managers from the central structure. There is a shared feeling and purpose of stretching the business and practices are being designed on a trial-and-error basis. The dominant sensemaking frame (original company) is dynamically interwoven with local sensemaking frames, creating an environment of multiplicity directed by a strong emotion of pride and cohesion. Future visions, more than existing languages or past experiences, are used to direct sensemaking.	• Growing business to different countries, number of worksites increasing (GM3, 6, 7) • Focus on future (GM6, 7) • Trial-and-error approach to new sites (GM3, 6) • Global practices non-existent or not formalized (GM7) • Multiplicity of local practices and sensemaking frames (GM3, 6)

* The same GM may have informed different descriptions because they had different experiences throughout their professional lives and compared them during the interview. In this sense, 16 interviewees became 22 informants in this contextual analysis.

Regardless of their personal attributes, such as gender and age, the industry and company context, and their roles, managers use four distinct narratives in their interviews, to describe enacted environments (also supported in the field notes). These narratives show different ways of understanding the differences among interpretive frames that are present in the environment, which we attribute to the use of two sensemaking processes (explained in the next section) that drive the enactment of a background for work-related interactions with teams. Some managers used different narratives to describe different interactions, thus suggesting that current theories that see them carrying a set of interpretive frames from situation to situation are not sufficient to explain the dynamics of framing. The same manager can enact different environments.

We maintain the manager-centric focus when labelling the interpretations of these different enacted environments as "standardized", "patched", "virtual", and "stretching". The terms translate the way managers experience their own work environment, not necessarily the way their teams experience it. Although we used only the managers as informants this was explicit in their narratives and is backed up by the literature on team dynamics (Waller, Okhuysen, & Saghfian, 2016). The work environment is thus "standardized" from the managers' perspectives when they experience similar environments with all their teams, and "patched" when they experience significant differences in interactions with different teams. When describing a "virtual" environment, they render salient the differences from live interactions, and when describing a "stretching" environment their emphasis is on how the number of conflicting frames are increasing in their work environment. The team members may operate mainly with live interactions among them and feel their work environment dominated by a few shared frames [GM16: "They are always there and develop their own stories… when I come back I may feel a stranger"].

4.5.2. Enacting multiplicity and flux in work environments

When zooming in on the data related to experiences in specific interactions, we identified different themes that suggest two sensemaking processes that underlie the enactment of interpretive frames in work environments. The first process, synchronous differentiation/integration, allows them to identify a low or high number of interpretive frames that can potentially constitute the background for interactions (differentiate), and to cluster them according to their understandings of how social groups tend to use similar interpretive frames (integration, with potential attribution of differences to "culture"). This process refers to the identification of clusters of interpretive frames that are manifestations of not only national culture, but also of organizational, professional, and functional cultures. Our empirical data thus confirm that "multiplicity" may be a feature of the conceptual business context (Mendenhall et al., 2012) but is not always a feature of enacted environments when managers organize work with teams. Managers create different interpretations regarding the co-existence of frames in the work environment, and so the interpretation of the business environment is not necessarily correlated with enactment of multiple interpretive frames in work-related interactions. We thus propose to use the duality "consensus/plurality" instead of multiplicity to explain the outcome of the enactment processes in work-related interactions, in that consensus represents enactments that tend to activate a few shared interpretive frames in the environment, and plurality represents enactments of many interpretive frames (that may compete for a place in collective sensemaking).

The second process, longitudinal differentiation/integration, allows them to condense interpretations over time, and see the environment as a stabilized background for interactions [GM4: "their culture influences the way they work and they are very closed... foreigners have to adapt to them"; GM10: "we are all integrated in this international environment created by the company's culture"] or a changing background for interactions [GM15: "I am a

globetrotter… always moving, always prepared to move… people do not organize in cultures, they organize in clans… we all learn and change with each interaction"; GM16: "managing is complex in times of crisis because everything changes.. I changed a lot, they changed a lot"]. Similarly to what was revealed with multiplicity, this shows that "flux" (Mendenhall et al., 2012) is not always a dimension that adds complexity to work environments. We emphasize that both stability and fluidity can result from enactment processes and should not be understood as a contextual feature that can be measured outside the manager.

Through interpretive processes of synchronous differentiation/integration, managers make their own interpretation in terms of multiplicity (degree of difference among co-existing frames) and enact consensus (mostly in standardized and virtual environments) or plurality (in patched and stretching environments). Similarly, through longitudinal differentiation/integration, they make interpretations of flux (degree of difference in the framing processes over time) and enact stability or fluidity (more visible in stretching environments). Moreover, managers can be path dependent or path creators (Garud, Kumaraswamy, & Karnøe, 2010), in the sense that some take the environment as the context for their management role and do not try to change it [GM3: "Cultural differences... it's not worth it to create situations that might make your activity difficult... we should feel proud to be able to adapt to each different culture"; GM10: "We worked mainly in a virtual environment, where everything was already organized; in these hubs, work speaks for itself"], and some believe that part of their role is to change the work environment [GM11: "When you accept the challenge, different cultures cannot stop you; you have to lead your teams'; GM16: "you cannot routinize, you have to constantly reinvent the way you manage the team... I took part of what I saw in Spain to manage in France and part of what I learned in France to manage in Spain"]. These two understandings change the way they try to influence the environment.

As organizers of work, managers can regulate the collective sensemaking by influencing the degree of difference among interpretive frames, working toward consensus (enact monolithic environments dominated by shared frames) or plurality (allow or even force the co-existence of frames in fragmented or combined ways). This can be achieved through different processes, such as negotiation (Putnam, 2010). For instance, GM1 structures her work with teams according to pre-defined rules and tools (consensus defined at organizational level) and GM9 follows the work structure defined in each project (consensus defined at project-level that temporarily violates the organizational consensus), while GM4 uses a plurality of frames with different teams, and GM2 focuses the development of his teams on learning how to use a plurality of frames. Similarly, managers can also try to drive the environment toward stabilizing the interpretive frame(s) or they can prepare to work with changing frames. In the examples above, GM1 educates all her teams to use the same previously defined frames across space and time, while GM9 negotiates different frames each time a new project comes along; and GM4 tries to adapt to each team's frames (thus not changing them), while GM2 brings different frames to a learning environment in which managers' and teams' frames co-evolve. Four different patterns become apparent in the cross-tabulation of their organizing processes: "centering" (enact consensus by promoting the activation of shared frames and keeping divergent frames out of the work related interactions), "switching" (bring plurality to interactions, emphasizing and deconstructing differences to reach partial agreements on meaning), "leveraging" (create obligatory passage points in interactions, in which differences fade and meaning is negotiated toward consensus that nevertheless does not crystalize in the organization), and "bridging" (assume plurality as background and constantly work to connect and disconnect meanings to several frames). We summarize them in Figure 2.

Figure 2. Enacting interpretive frames in the work environment
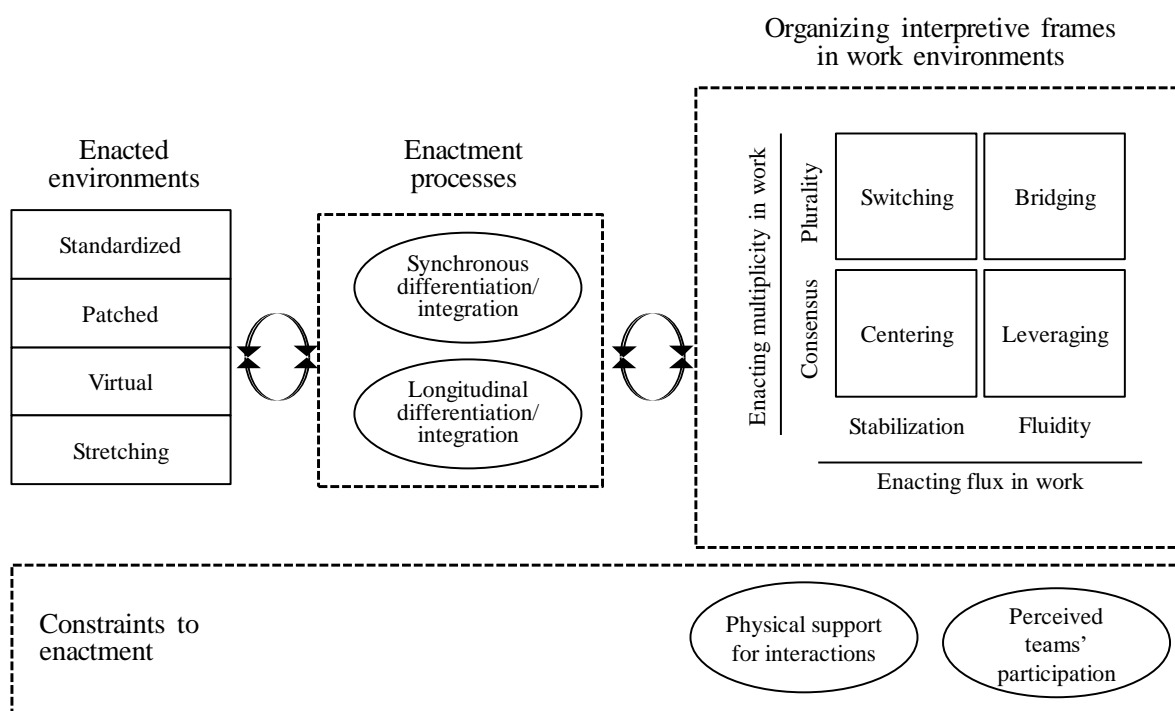
Both centering and switching are organizing the work environment toward stabilization and are used when managers understand the environment as an external constraint to management practices (thus feeling powerless to change the frames in use), or believe it should be stabilized (thus purposefully working to increase stabilization in the frames already in use). Leveraging and bridging are used by managers who have a different relationship with the environment, believing it is and/or should be constantly changing. Regardless of the background in terms of consensus/plurality, these enacted environments use temporary frames to allow meaning negotiation in specific encounters or projects, which do not necessarily become institutionalized. In Table 3 we present the data (illustrative examples of quotes) supporting the inductive identification of the four organizing processes, and summarize our interpretations below.

Table 3. Data supporting the identification of the enactment strategies used by managers (illustrative examples)

Centering [shared frame] [stability]	• ***Build one common and stable frame (organizational culture, work culture)***: GM1: "We all talk the same language, use the same frameworks and tools. We have standards… Everyone knows and follows them." GM7: "We all work in a North American Startup culture, that spirit influences all practices." GM13: "... in a multicultural environment... different from managing people in different countries… There is a high corporate normalization..." • ***Keep differences out of the sensemaking process***: GM7: "People are chosen from the start to fit and adapt to this culture. For instance, our leadership favors the work-life balance and we make sure all people around the world get this." GM10: "People from all over the world work from regional hubs (London, Berlin, Paris, Rome) or in virtual teams that report to a manager that can have a different nationality and can be elsewhere. These hubs have a multinational culture, so that even with people from different places... the work culture overcomes the differences."
Leveraging [shared frame] [fluidity]	• ***Create temporary obligatory passage points in interactions:*** GM9: "During each meeting we follow a specific agenda and protocol, common to all teams around the world. (...) If someone is not following it, I have to be able to (sometimes during one-hour call) refocus goals, replan, find alternatives, correct situations, and readjust the entire agenda." GM6's team members: "Without these live meetings we wouldn't be able to build a global vision"; "These check points are important to share perspectives and strategies, and to know what everyone is doing.. people living in their own projects all around the world may lose sight of what is important." • ***Renegotiate meanings under one (temporary) frame:*** GM6: "We have to remain flexible and agile, so we have a basic strategy, a logic, some shared premises, but not rigid plans and processes. Instead, we need empathetic communication in the team that works almost instinctively." GM11: "During those two years I created a strategy that bound everyone under one same belief – the client is at the center of everything we do – and it was that belief that made them run the extra mile!"
Switching [multi-framing] [stability]	• ***Use different frames in different interactions:*** GM3: "I hired an excellent Italian manager, he is a great example! Wherever he is, Spain, Mozambique, South Africa... Local teams see him as local. He changes completely, and this happens automatically." GM4: "In Korea I worked with shadow managers, local teams would not accept my (direct) leading… Here I work in a European environment, a very different set… but I use my knowledge of Korean (language and routines) in the top management meetings." • ***Emphasize and deconstruct differences to reach partial agreements on meaning:*** GM4: "There are constant lost-in-translation, misunderstandings… because we are all alert to that possibility, they do not revert to bigger problems, they are solved with clarification... I have to use less abstract and more sequential communication... Marketing strategy does not mean the same to a Korean... I have to turn concepts into specific examples." GM14: "At first I thought it was his problem, afterwards I realized it was due to religion. It made me realize that I am indeed looking at different realities and that I have to adjust my expectations… but they also adjust theirs."
Bridging [multi-framing] [fluidity]	• ***Assume plurality as background for interactions:*** GM2: "To be able to go every month, as I do, to China, Japan, South Africa, Latin America, the US... These different realities... I create executive committees, mixing people from top-down... I take notes on the meetings, so that I can summarize everything to the teams... a manager should be happy when teams learn even more than he does!" GM12: "There has to be a common perspective shared by me and the local manager, related to business goals... alignment, not standardization. (...) We want things to be similar everywhere, but this does not work. Accept the difference of what is different! I do not change my behavior, but I respect all differences... and mix people from different countries and functions in lean management meetings." • ***Couple meanings in different frames:*** GM2: "My way of directing people is by telling stories, examples... Humor does not work with a different culture, but stories do. Stories are the shortest distance between people, they can inspire them to see things differently. I use stories to create the context for each global meeting." GM8: "How to get people from different cultures to interiorize one specific role that adds value to a project, but under their own way of thinking, this is the relevant issue... at times I am a translator. I interpret what worries the person and try to explain this to others, trying to correspond to their different ways of thinking. The secret for this is empathy and active listening to feedback from the team."

Centering. Using synchronous and longitudinal differentiation/integration, some

managers envision the work environment as a space of consensus and stabilization in which

"organizational culture" [GM1, GM7; GM13] or "work culture" [GM10] orient the interpretation and actions of all their teams. These social systems overlap or prevent the activation of interpretive frames that are not coupled with them [GM7: "in this multicultural environment we are very similar"; GM10: "the work culture overcomes the differences"]. Managers organize work with all their local teams in similar ways across the world [GM1: "everyone uses the same framework"]. When working in global or regional hubs that combine individuals from different cultural backgrounds, the environment is described as "multicultural" [GM7] and (not *or*) "standardized" [GM1], or "normalized" [GM10; GM13]. These managers see their leadership role as visionary and regulatory, enacting environments in which all teams work alike. They advocate the standardization of "language", "norms", "tools", and "spirit", and also try to keep alternative frames deactivated, by selecting team members that share a specific mindset, and using socialization practices that seek consensus (divergent frames may activate when interacting with team members, but only outside work related events).

Switching. Some managers do not enact consensus but instead create environments in which different interpretive frames activate and compete for a place in interpretive processes (conflicting frames). Their organizing endeavors might imply a response to an environment that is perceived as stable, in which frames already used by teams are too stable to change [GM3: "they are completely different, we must adapt"], or a purposeful engagement with plurality because they see it as advantageous (to easily connect to local business practices, for instance) [GM5: "we need to be present in different places with people that understand the local practices"]. These managers claim that flexibility is an important leadership skill. In their view, managers should blend in the teams' framing processes and adapt behaviors to different expectations [GM4: "In Korea I tried to act like a Korean… I used local managers to communicate with local teams; GM5: "nowadays my adaptation to different environments is

automatic and unconscious"]. This flexibility implies that they are able to understand not only the teams' expectations toward leadership, but also cultural idiosyncrasies, to allow them to adapt communication (verbal and non-verbal) to different interpretive frames, and negotiate meanings with different teams.

Leveraging. Some managers understand that consensus is/should be used only temporarily to create obligatory passage points in work related interactions. In our data this is seen in the use of a "shared vision" that supports the manager-team communication during a period of time [GM11], "language and governance frameworks" that are used in particular projects [GM9], or even more temporary mechanisms such as "agendas and protocols" used in meetings with teams [GM6; GM9; GM15]. Interpretive frames used by teams outside this environment fade away during interactions, and communication becomes routinized with common references [GM9: "We all have other responsibilities in different places, but when we work in this project we use a common framework"; GM11: "We were emotionally connected to this vision during those two years"]. Work related interactions are organized toward consensus, but there is no strategy in place to ensure the continuity of those shared understandings when each (long or short-run) project, or even meeting, is over [GM6: "During these meetings we connect in a global vision... then everyone goes back to different projects and tends to disconnect... this is why we need the meetings every three months"]. We use the term "leveraging" to classify this enactment process toward consensus and fluidity, because it raises opportunities for meaning negotiation whose results do not crystallize in the organization, in which the collective sensemaking processes operate with changing interpretive frames that are nevertheless shared among participants in interactions. Leveraging opens possibilities for new shared frames to emerge in the organization without a conscious effort to stabilize them.

Bridging. Some managers assume plurality and fluidity as the background for their interactions with teams. They believe there is no sense in trying to create consensus for interactions, because the environment is always in flux and the co-existence of different frames will allow teams to better react to (or anticipate) changes [GM12: "If we are too alike or if I give them too many rules to follow, then we will not be ready for the surprises of day-to-day business"; GM16: "The teams act without my constant presence… when I come back everything is different"]. In this case, their emphasis is on creating flexibility in the workplace (Putnam, Myers, & Gailliard, 2013) by building bridges among interpretive frames by openly discussing meanings, instead of selecting dominant frames [GM12: "I simply make lots of questions to everyone all the time… we have to understand each other… but I do not adapt to their expectations"]. This can be achieved for instance by using metaphors that allow different teams to understand and be inspired by the underlying meanings in a story even when actors use different frames to interpret it [GM2: "We have different languages and perspectives... so I use stories, metaphors… everyone understands them because they connect to many different situations"]. It can also be achieved with translation techniques that connect meanings among frames (meanings, not words, are connected by the manager) [GM8: "I am a translator... I have to understand different ways of thinking, so that I can explain to others what that person means with that reaction"].

4.5.3. Socio-material enablers and constraints to enactment

Our data show that enactment is constrained by the medium used to connect with teams, because it can influence the selection of dominant frames and the stabilization of frames during interactions. In Table 4 we present the data (illustrative examples of quotes) supporting our inductive identification of the variables that managers believe influence the

connectivity with teams. The main difference reported is between frequent live interactions in a physical space, and at-a-distance communication. All our informants work with technology mediated communications, and most reported a tendency to replace live interactions with at-a-distance communications.

Table 4. Data supporting the identification of the managers' interpretation of how connectivity and the teams' participation in the framing processes influence the work environment (illustrative examples)

Physical support for interactions	• *Difficulty in building a trustworthy environment:* GM1: "It is important to build a comfort zone, where you know your team is there to help you and vice-versa." GM6: "You have to invest time to build trust. You can do it over a meal or drinks and by bringing the team together in a more informal environment. (e.g. happy hours, teambuilding events, meetings outside the office)". GM8: "To win local teams' trust you have to recognize you are not always right, regularly prove your value, do not confront their own cultural issues, and follow some basic principles, such as keeping confidentiality. I developed informal relationships with the teams. This really facilitates the work." • *Flow of communication:* GM4: "Talk slowly, avoid abstraction, bring concrete examples, sequential, translate to specific situations." GM7: "Non-verbal communication is important to establish a context. You have to complement email, calls and chat with visual aid. We use videoconference." GM8: "When I have different cultures in one meeting, I do not raise my voice, this could be wrongly interpreted." • *Organization of the workflow:* GM1: "In international projects timelines are really short, people cannot follow their personal rhythms… You prepare for calls, you know you have a specific slot of time, you prepare the agenda and supports... and stick to them." GM8: "Teams that work with me in this office can grab me in the corridor... but I take most decisions away (from teams), by email. We only meet when I have to solve a specific problem in field or to brainstorm in workshops." GM9: "The way you coordinate your work is related to the technology you use. In a call, you have to close issues. When a cultural gap blocks communication, you can try to discuss it but mostly you postpone it to a later moment. It is also not easy to find the perfect timing for everyone, when people work in different timelines. This changes the dynamic: sometimes I separate participants in different calls and later combine notes in a single document." • *Material connectivity (presence or technology):* GM6: "Specific moments for live communication become more important because teams are geographically separated. We concentrated the moments and extended them to two days every three months in a learning environment." GM8: "Live interactions are important to discuss, but it is possible to manage work from a distance." GM12: "Managing teams in different sites is important to reduce costs and trauma from expatriation. Nowadays this is possible with technology, although in specific situations we have to meet in person. For instance, I introduced Lean methodology to ensure bottom-up improvements where everyone is held accountable. This requires live meetings to discuss and interact, which I held under a rotation plan with diverse participation."
Interpretation of the teams' participation in the framing processes	• *The team is passive to the manager's influence:* GM3: "I explain what the company wants... Local managers spread the message... And by observing the different teams around the world, I know the message was well understood, they know what to do next." GM4: "When people work in multinational environments, they know they have to minimize cultural differences in interactions, so in the global meetings only very small differences (language) become salient, this is rare and does not interfere with work." • *The team is resistant to the manager's influence:* GM8: "We are changing from a traditional hierarchical model to a project-basis report. I live in Portugal, my team is in Spain, and I report to London. Spanish teams tend to get together and protect themselves from outside managers. I always have to prove myself." GM13: "The initial interactions were really difficult... they expected something different from a manager, and I couldn't make them understand... Very frequently I saw confusion in their reactions... and in my next interactions with them, nothing was being done according to my requests…" • *Manager and team influence each other (interactive):* GM11: "You have to understand what makes them run that extra mile, which is different from culture to culture... If you understand that, they will follow your lead." GM16: "When you build a team they will not work as you do... for reasons of culture and specialization... I had to change the way I talk with each team... They adapt to me and I adapt to them."

Depending on the relationship of the manager with technology, they find it to be either a very good substitute for live interactions [GM9: "Using the chat is the same as talking live, I don't even feel the difference"] or a very important constraint in the work environment [GM2: "It's not the same, people like to touch, need to feel each other to be able to understand each other"]. These managers perceive the work related interactions challenged by issues of trust, flow of communication, and workflow [GM1: "I have to talk slowly during the call"; GM6: "Trust is at stake if you don't spend time with the person"; GM9: "The agenda is pre-defined… you just skip to the following issue"]. In their view, when their interactions with teams rely mostly on at-a-distance communication, there is a decrease in trust, an increase toward verbal-based communication (the non-verbal is pushed out of many interactions), an increase in linear and slower pace discourse, as well as an increase in tight controls over timeframes that organize the workflow. However, it does not necessarily increase plurality. In fact, the more managers perceive at-a-distance communication as a challenge to work, the more they try to keep divergent frames out of the interactions by increasing the number of live interactions, the time spent in interactions, and the informality of interactions [GM6: "We need these regular live meetings exactly because we talk mainly over skype and phone …we increased the duration of the meetings, now we meet for two sequential days"; GM8: "I go out with the team after work… these moments are important to increase trust… (because) in the day-to-day they can't catch me in the corridor to talk with me"; GM9: "(during the calls) you don't have time to solve misunderstandings"].

Enactment also depends on the way managers understand the participation of teams in the framing processes. We identified three different accounts describing their interpretations of the contribution of teams. In the first account, managers describe how the environment creates passive teams [GM7: "The company has a strong culture, people are chosen to fit it...

so from the beginning the potential conflicts are reduced... it is easy to manage people from different nationalities because they follow predetermined metrics"]; in the second, managers describe how teams resist them, holding to pre-existing frames and are not willing to negotiate meanings [GM10: "I had problems… my team tried to diminish, degrade my role, my work, my presence... they did not understand what I was trying to accomplish"]; in the third, managers describe an interactive process in which manager and team influence each other [GM14: "It's an iterative process where I adapt to their expectations and they adapt to mine"]. Table 4 presents the data (illustrative examples of quotes) supporting our inductive identification of the interpretation patterns showed by managers in this regard.

When interpreting the team as passive, managers tend to enact self-referencing processes. They interpret, decide, and communicate using the same cognitive and discursive frames across space and time, and believe that all teams fit (should fit or will eventually fit) these frames [GM: "Yes, I do believe there are absolute truths when it comes to best practices at work... and I require my teams, regardless of their different backgrounds, to follow them"]. They change the language used to communicate but do not seek to understand the interpretive frames used by different teams [GM12: "Of course I adapt the way I speak to them... but I do not engage in local habits… they usually get used to my way of being"]. In this sense, managers are organizing work by centering and making their own frames dominant. They do not enact conflict, neither promoting or engaging in the transformation of frames, but reinforce their own frames over time. Sensemaking theories explain how these situations can be dangerous, because managers can get detached from the meanings used by their teams (Weick, 2012). As in the metaphor of Babel, the Biblical story, people became incapable of collective endeavors because they spoke different languages and thus could not coordinate actions toward common goals.

When interpreting the team as resistant or the manager-team relationship as recursive in terms of influence, managers interpret their role as a dynamic interplay (sometimes described as struggle) in a fluid work environment. In these situations, they can accept and reinforce the co-evolution of their frames with the interpretive frames used by teams. This is done, for example, by increasing the quantity and duration of communication and observation, and emotional connection with teams [GM6: "observing is more than just seeing, you have to be present, mindful"; GM11: "You have to take the time to understand what makes them run the extra mile"], and by promoting plurality in events [GM2: "I make sure that different cultures are represented in the management meetings, but also the different functions, even our legal counsellor.. they all have to participate!"; Field Note: we were able to confirm this with direct observation]. They can also engage in power games with teams, which can be seen as struggles [GM8: "always proving myself"], political games [GM1: "political skills become very important"], or productive negotiation [GM9: "the art of negotiation is at the core"]. By accepting, reinforcing, or negotiating frames in the work environment, managers can increase plurality but also open more possibilities to meaning negotiation, which may facilitate the emergence of consensus.

4.6. DISCUSSION

Global management literature faces three important challenges that prevent a comprehensive understanding of how managers enact contexts (Bird & Mendenhall, 2016). First, when studying "culture" as a set of stabilized values, stories, frames, toolkits, or categories, theories cannot provide comprehensive explanations on how managers and teams seem to be affected by cultural differences in some situations but not others, and on how this can change over time. Second, by overemphasizing the influence of "national culture" over

other cultural clusters in the framing processes, it misses the complex interplay of cognitive and discursive frames that can be activated in interactions. Third, by focusing on the manager-team cultural fit as an explanation for managerial success, it fails to notice how cultures are brought to life (and change) in interactions. In this study we endeavored to overcome these limitations, by making a case to extend global management research with sensemaking theories, and particularly the concepts of "enactment" (Weick et al., 2005) and "partial activation" (Luhmann, 2013) to uncover the recursive relationship of managers and environments.

This study led us to propose an analytical separation of the global business context, as it is studied in global management research (Mendenhall et al., 2005), from the environments that managers enact when they organize work. Global management literature tends to situate the study of context at the organizational level (Bartlett & Ghoshal, 2002; Heegen & Perlmutter, 1979) and may assume that managers and teams interact in this context, infused with multiplicity and flux (Mendenhall et al., 2012). We contend that while the business context is interpreted by managers in this way, they build separate interpretations about the environment for work related interactions. Research does not always distinguish these different levels of context, which can (sometimes unintentionally) imply that the framing processes that connect managers and teams are always characterized by multiplicity and flux, which we show to be untrue.

Management literature has many descriptions of the contextual features that affect decisions and leadership in global environments (Mendenhall et al., 2012; Bartlett & Ghoshal, 2003). However, as these descriptions usually use etic perspectives to observe the context, they may assume that the features that are used to describe the global business context can also be used to describe the context in which work is organized, and that the manager and the team experience similar environments in their interactions. Our data show

that this is not the case and point to the need to differentiate a conceptual business context in which managers and teams can be seen as part of the overall organization and in which interactions can occur for different reasons, and a more concrete context in which work is organized through interactions. By describing "context" as a reality outside the actors, this research cannot explain why "national culture" seems to influence some situations and not others. We thus open a different level for research in the global context, in which interpretive frames tightly coupled with different social systems can (but will not always) influence interactions, and frames associated with different socialization processes transform each other.

Managers do perceive the influence of national culture in the global business context. However, they also experience how interpretive frames tightly coupled with different cultural clusters (e.g. functional, individual, project, and organizational frames) can overcome and/or interplay with them in specific interactions. Global management research usually explains the interrelation of frames with hierarchical or sequential relationships between socialization processes, in which "national culture" comes first and thus influences all others (Hofstede, 1994). However interesting in explaining how interpretive frames develop with collective meaning structures over long periods of time, this is not sufficient to explain how they interplay in interactions, because no matter how they were developed, some will be activated and others will become dormant (Luhmann, 2013). By situating the interplay at the level of work environments, global management research can investigate how interactions with teams are influenced by the interpretive frames that individual actors bring to the events, and also by the dynamics that they create through regular interactions.

There are two important consequences coming from this insight. First, the mere presence of participants with different national cultures is not sufficient to activate divergent interpretive frames in the environment and consequently introduces uncertainty or ambiguity

in the sensemaking processes. The concept of "partial activation" (Luhmann, 2013) can explain why the structural fit of manager, team, and culture is not always relevant in interactions, as it supports the idea that actors can activate interpretive frames tightly coupled with national culture, but will not always do it and will never activate cultural dimensions in their fullness. Second, it reminds researchers that managers are manager-centric in their interpretations of the environment, and that this interpretation influences the number of frames that can be activated and the change that is introduced in frames over time (Sengupta & Sinha, 2005; Putnam & Holmer, 1992).

Global work environments, as socio-material sites for organizing collective action, should be understood not as contexts existing outside the actors and that are characterized in terms of stable hierarchies or isolated impacts from specific cultural clusters, but as enacted environments. Some are more prone to activate divergent frames than others, as interpretive processes are enacted in interactions, and thus always occur in a context and never in a vacuum (Sandberg, & Tsoukas, 2015; Maitlis & Christianson, 2014; Weick, 1979; Luhmann, 2006). We found that some managers enact work environments that tend to push divergent frames away from interactions while others invite many frames in and thus are more propitious to raise situations in which frames compete for a place in sensemaking (conflicting frames); some tend to reproduce frames and others to transform frames. Managers thus build conditions for replication when using centering or switching to organize work, and for transformation when using leveraging or bridging.

Research can gain from complementing etic perspectives on the business and organizational context with studies of the enactment processes that bind managers, teams, and environments. Here we focus on the enactment processes that bring different environments to life in terms of consensus/plurality and stability/fluidity of interpretive frames. The sensemaking processes that underlie this enactment provide an important and missing

element in research. National culture and cultural fit may play a role in interactions, but here we highlight that they will not have the same impact on all enacted environments. This insight can be used to build more comprehensive models on how workplace flexibility is enacted in global contexts (Putnam et al., 2014).

The managers' organizing endeavors toward consensus/plurality and stability/fluidity of frames are not the only important factor in the enactment process, though, because the way interpretive frames come to interplay depends on the socio-material conditions in events (Putnam, 2015; Weick, 1979). Our findings suggest that the way managers physically connect with teams influences their enactment and that this influence is related to how they understand technology as a support for interactions. Technology can limit the number of frames available for collective meaning negotiations, and the number and duration of interactions. This impact can be more salient in the international business context, as managers and teams regularly interact at a distance (Mendenhall et al., 2012), and it might not be generalizable to other contexts. Nevertheless, even when sharing a work space, managers and teams can use technology to communicate, and the context similarities should therefore not be undervalued. Technology changes the possibilities and the rules of communication and work (Hardy & Thomas, 2015), and so should be further studied as an important contributor to the managers' enactment strategies. In fact, we could see an increasing recurrence and a paradoxical effect of virtual interactions: while technology increases the possibilities to communicate, it tends to decrease the possibilities for meaning negotiations. Both plurality and fluidity tend to be rendered less salient when the work environment favors virtual connectivity over live connectivity, because it tends to push conflicting frames out of the interactions. This can have a harmful effect on work related interactions when managers are kept out of important collective meaning negotiations (which occur mainly in live encounters among local team members).

Another socio-material enabler or constraint to the enactment of work environments is the managers' interpretations of the participation of teams in the framing processes, because they can lead to closing or opening possibilities for meaning negotiation. Managers close possibilities to negotiation when enacting consensus and expecting a passive team, and open possibilities when enacting plurality and/or expecting a resistant or interactive team.

The practical contributions of this study are also considerable. Our empirical data resonate with the common understanding (shared by our subjects) that organizations are becoming more plural and fluid, and that work environments are increasingly shaped by technology. They also show that managers enact plurality and fluidity in different ways, and that there is probably not "one best way" to proceed. This consideration is important to managers' development and human resources strategies in organizations. Managers' development should introduce the concept of enacted environments as a way to increase the managers' self-awareness about possible manager-centric interpretations and the dangers of low physical connectivity with teams; describe different strategies that can be used to enact interpretive frames in work related interactions and the way they create different backgrounds for organizing collective action; and alert to how connectivity and interpretations about the participation of teams in the framing processes can constrain the possibilities for meaning negotiation with teams. Regarding human resources strategies, our study points to the need to rethink the way managers and teams are being recruited and developed, which tends to focus on a necessary "fit" between culture, manager, and team. These strategies sometimes lead to work environments in which plurality and fluidity are pushed out of interactions, which can reduce collective meaning negotiation and change in the organization. Instead, human resources strategies should reflect on the level of plurality and fluidity they wish to promote in the work environment, and choose diverse strategies that create different combinations.

4.6.1. Limitations and future research

As with all research, it is important to acknowledge limitations. The first is related to the possible generalization of conclusions. Our intention was to offer conceptual and not empirical generalizations. In this sense, the global context is used as an "illuminative" case to offer important insights on sensemaking processes that connect managers and teams that operate with conflicting frames. While we find this context illustrative of conditions of plurality, further research is needed to understand how these findings can be extended to other contexts.

Methodological limitations are related to the sample, the simplification device used to collect data, and the empirical material. Regarding the sample, the use of participants born in the same country and educated in Western management philosophies, although purposefully used to increase the communicative validity of the study, may be seen as a limitation in scope. Although the sample covers experiences in different parts of the world and interactions with different cultures, further research is needed to understand if national culture can affect the way managers interpret the work environment. Regarding data collection, we assumed that each team is a system that operates with shared frames, not zooming in on the teams' dynamics for meaning construction, as our focus was on the managers' interpretations.

Further research is needed to consider the way teams work with different frames and build shared frames. Regarding the empirical material, data are highly based on descriptions collected from interviews, and so they bear the stamp of the participants' own perspectives. This constitutes both a strength and a weakness, as while recognizing the importance of the managers' interpretations to their strategic choices, it assumes a close relationship between their discursive practices and their interpretations. One of the researcher's previous experience of 13 years as a management consultant was used to critically analyze managers'

discursive practices, and we also complemented the interviews with visits to sites and direct observation, but not all sites were visited.

4.7. CONCLUSION

Managers and teams can activate divergent frames that compete for a place in interpretive processes used in work related interactions, which can confound meaning construction (Cornelissen & Werner, 2014; Giorgi, et al., 2015; Putnam & Holmer, 1992). In our globalized world, frames interplay in increasingly complex and dynamic ways (Mendenhall, et al., 2012), yet contrary to what some theories suggest, this does not mean that all global managers have to cope with conflicting frames in their work interactions with teams. Understanding how different combinations of interpretive frames are activated and change in work environments is important to prepare managers and teams for fruitful meaning negotiations. Sensemaking perspectives provide interesting explanations that have not been duly explored by global management research, as they use different perspectives on how actors and context interact (Tsoukas & Chia, 2011). We offer contributions from the concepts of enactment and partial activation to extend knowledge on how a recursive interpretation process used by managers can influence the activation and transformation of interpretive frames in work related interactions.

Interpretive frames are used and can be transformed from event to event, and although both managers and teams have a role in this process, organizational hierarchies tend to favor the managers'. Our study investigated this role, and specifically sought to identify how manager-centric enactments influence the activation and transformation of configurations of interpretive frames. The relationship between managers and environment is central in our analysis. Although interpretations about the global business context entail multiplicity and

flux, managers enact different combinations of consensus/plurality (the co-existence of conflicting frames) and stability/fluidity (the degree of change in the frames) in work related interactions. Theories that use etic perspectives to describe the "global context" (Bartlett, & Ghoshal, 2003; Mendhall, et al., 2012) usually do not consider this manager-centric enactment, and thus might find it hard to explain how some work environments seem very stable and consensual while others seem very plural and flexible. We contend that theory should consider this manager-centric enactment as a complementary level of research.

Managers can organize a background for work related interactions by increasing or decreasing the number of interpretive frames that interplay in the environment to grant some of them legitimacy over others, and to institutionalize some as more permanent references in the organization. They are constrained in this process by the medium that supports the interactions and by their interpretations of the teams' participation in the framing processes. In their enactment, they open or close possibilities for collective meaning negotiation, although not always in a conscious way. Increasing their awareness to this process is paramount. With the aim of facilitating collective sensemaking, for instance, managers may try to reduce the activation of divergent frames and rely on at-a-distance communication technology. When they interpret their team as passive, this can create self-referencing loops that close managers in their own interpretive frames, increasing the risks of blindness in the sensemaking processes (Weick, 2012) and preventing a healthy meaning translation among frames that might otherwise lead to desirable organizational outcomes. On the other hand, increasing the activation of divergent frames may create opportunities for meaning negotiation, and a healthier co-evolution of interpretive frames. We do not advocate for one or the other path, as our data suggest that different strategies might be suitable, but believe it is important for managers (and thus for researchers) to be alert to these possibilities. Enacting

work environments that close opportunities to transform frames can in the end jeopardize the

collective sensemaking processes with teams.

CHAPTER 5. ORGANIZING DUALITIES OVER TIME[8]

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5.1. ABSTRACT

Managers face conflicting demands in international business that can be understood as opposite organizing options. Although management dualities' theory can be useful to explain how managers understand the contingent or interdepend nature of the opposing poles, it is not sufficiently discussed in international business research. This inductive study uncovers different ways of facing the duality "standardization/adaptation" over time, and is a first step in connecting both literatures. We contribute to theory in both fields with insights on how managers use cognitive and emotional processes to develop complex interpretations regarding multiple dualities and connect them with concrete actions of teams.

Keywords: Managerial cognition; Standardization/Adaptation; Inductive research; Management dualities

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[8]This chapter reproduces the latest version of a co-authored paper that received valuable contributions from Editors and anonymous reviewers (see Note 3), to whom I am grateful.

5.2. INTRODUCTION

Managers working in the international business context are organizing agents that constantly face decisions on whether to adapt strategies, actions, and behaviors to local practices, and/or explore synergies from globally standardized routines (Bartlett & Ghoshal, 2002; Birkinshaw, Crilly, Bouquet, & Sun Young, 2016; Devinney, Midgley, & Venaik, 2000; Griffith, Cavusgil, & Xu, 2008). They may address the organizing options separately or connect them as a simultaneous need to standardize/adapt. Their choices depend up to a point on how they differentiate and integrate multiple realities that become salient in the environment (Devinney et al., 2000). Also referred to as global integration/local responsiveness, this simultaneous need is studied as a duality, a pair of imperatives that are equally important but in conflict with one another (Birkinshaw et al., 2016; Fredberg, 2014). Managers deploy conflicting demands into organizing endeavors in different ways, emphasizing one pole over the other or delegating the need to cope with both poles to their teams. In the first situation, they might trigger vicious circles because the undervalued pole can manifest in unwanted outcomes (Tsoukas & Cunha, 2017). In the second, they might leave high ambiguity in decisions and hinder effectiveness in collective action (Lewis, 2000). When coping with dualities, thus, managers walk in a thin line and may feel constantly pressured to solve the unsolvable.

Dualities entail logical contradictions and are both the raw material and the unavoidable distillations of sensemaking processes used by managers to interpret the business environment and make decisions (Putnam, Fairhurst, & Banghart, 2016). Researchers on these phenomena are setting the rules to build a meta-theoretical perspective to explain how organizations and managers can move away from a contingent view focused on the opposites, to an interdependent view of contradictions and tensions (Putman et al., 2016; Schad, Lewis, Raisch, & Smith, 2016; Smith, Erez, Jarvenpaa, Lewis, & Tracey, 2017). This emergent field

stresses the need to complement studies on which one pole of the duality should/can be pursued, with studies on how the poles relate and interact with each other. This stream understands dualities with paradoxical, dynamic, dialectical, ambidextrous, and balancing models (Birkinshaw & Gupta, 2013; Clegg, Cunha, & Cunha, 2002; Eisenhardt, Furr, & Bingham, 2010; Farjoun, 2010; Smith & Lewis, 2011; Smith, 2014) that nevertheless have had limited use in international business research. This is surprising, as the heterogeneity and complexity of international contexts reveal and intensify dualities (Fredberg, 2014; Hargrave & Van de Ven, 2017; Lewis, 2000), and particularly the simultaneous need to standardize/adapt the actions of organizational actors across the world. We argue that important theoretical advancement lies in the intersection of international management research and interdependent approaches to management dualities. On one hand, the interdependent approaches on dualities can increase our understanding on how organizing agents in the international context become aware of the interrelated nature of contradictory options and cope with them. On the other, the international context provides interesting sites for empirical research that can be used to bring more concrete understandings on how managers interpret and handle conflicting demands.

The importance of the managers' interpretations about standardization/adaptation has long been acknowledged in international management theory (Devinney et al., 2000), and research on how they cope with conflicting demands is a longtime request (Birkinshaw & Gupta, 2013; Putman et al., 2016; Schad et al., 2016), but empirical studies are still incipient in both fields. Current research at the individual level is scarce and mostly emphasizes the cognitive mechanisms used to address dualities (Putnam et al., 2016; Schad at al., 2016). Particularly in the international context, the construct of "global mindset" has been used to explain how managers address contradictory realities related with strategic and cross-cultural challenges (Clapp-Smith, & Lester, 2014; Gupta, & Govindarajan, 2002; Levy et al., 2007;

Story et al., 2014). Cognitive constructs are useful to identify the abilities used by managers to think about dualities as design problems, but are not sufficient to explain how the thoughts relate to experiences that happen in concrete situations. With an overemphasis on cognition, research tends to describe analytical processes, and might miss the emotional tensions that are part of the managers' experiences. This is a blind spot for both the literature on international management and management dualities, which can be addressed by an open dialogue among them. For instance, management dualities theory considers emotional threats arising when managers face dualities, such as frustration, blockage, uncertainty, and paralysis (Calabretta, Gemser, & Wijnberg, 2017; Smith & Lewis, 2011), which can be used to enrich international management theories. However, there is usually no reference to the existence of positive emotions, and international management research can explore them.

The shortage of empirical studies with a longitudinal perspective is a limitation to both fields. Current empirical studies usually describe short periods of time, which may lead to considerations that managers make sense of different instantiations of dualities with similar strategies (Smith, 2014). The interdependent perspectives on dualities suggest dynamic processes, in which organizing options may be faced differently in different situations, but sustained in thoughts and discourse through ongoing cycles of action-reaction that keep the duality alive for managers (Eisenhardt et al., 2010; Smith, 2014). International management researchers have studied how standardization/adaptation is addressed with different organizing options but does not explicitly integrate them in dynamic models, and thereby can gain useful insights from this literature. How do managers experience different manifestations of a management duality? Is this a positive or negative experience? Do they face dualities in similar ways as time goes by? Inspired by these questions, this paper addresses the overall question "*how do managers make sense of the organizing duality standardization/adaptation over time?*". We used an inductive approach with a longitudinal

focus to understand the inner perspectives of managers over time because they reveal the underlying processes used to make sense of conflicting demands.

We bring important contributions to international business literature by combining it with empirical findings and literature on management dualities, answering current calls for more interdisciplinary and qualitative research (Branner & Doz, 2010; Birkinshaw, Brannen, & Tung, 2011; Cheng, Birkinshaw, Lessard, & Thomas, 2014). First, we use the empirical findings on the international business context to explore blind spots on the literature on dualities. Specifically, we show that managers might see dual options as discrete problems or as ongoing manifestations of a single duality and face them through cognitive and emotional processes, alone or with the support of their teams, which is important to complement interdependent views on dualities (Smith et al., 2017). Second, we use the insights from that literature to create richer understandings of sensemaking in the international business context, uncovering the dangers of engaging in empty or blind sensemaking (Weick, 2010) when coping with conflicting demands. We also bring important contributions to practice, particularly by increasing the managers' awareness to the way they handle dualities, and the different sensemaking strategies they can use to take charge of their development over time.

5.3. LIVING WITH DUALITIES IN INTERNATIONAL BUSINESS

Managers working in international business contexts face multiplicity and flux (Mendenhall, Reiche, Bird, & Osland, 2012; Maitland & Sammartino, 2015), which increase the salience of conflicting demands (Hargrave & Van de Ven, 2017; Lewis, 2000)[9]. One important organizing duality they face in this context entails options on standardization and/or adaptation of practices of teams operating in different geographies (Bartlett &

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[9] The study presented in Chapter 4 explains how multiplicity and flux are always understood in the international business context but not always enacted by managers in the work environment.

Ghoshal, 2002; Birkinshaw et al., 2016; Devinney et al., 2000; Fredberg, 2014; Griffith et al., 2008). Standardization/adaptation might be understood as an organizing duality with underlying paradoxes about competing configurations of actions (Smith & Lewis, 2011). Each pole is perceived as an organizing option (a set of specific values, practices, and behaviors) that cannot be implemented simultaneously with the other and yet both opposite options are interrelated (Smith et al., 2017). For example, "standardizing" may imply that processes and frameworks are replicated across geographies and thus all teams work in similar ways, and "adapting" implies that they are changed across geographies to accommodate local expectations, and thus managers have to cope with teams that may work with very different frameworks. To replicate and to change practices at the same time and in the same place may seem impossible and yet necessary to achieve efficacy and efficiency, thus raising complexity when managers consider different options to configure collective action.

The duality is mostly studied at strategic level, because it is related with how entire new operations ought to be carried out, which have large impact on the organization (Bartlett & Ghoshal, 2002; Benito, Lunnar, & Tomassen, 2014; Birkinshaw et al., 2016). In this scope, decisions on standardization/adaptation are not usually taken individually by one manager, and management teams often assume the role of designers, imagining scenarios and options and envisioning paths of action. However, international managers might have to cope with this duality in their daily organizing of work with direct teams operating in different environments across geographies. At this level, the challenge of organizing is not only a challenge of design but also of deploying decisions into work arrangements. Managers rely on evaluations of the environment to create scenarios to (re)design configurations of actions, but also on situated interactions with teams. In this sense, managers must articulate the duality at cognitive and communicational level not only during decision-making processes

with peers, but also during solitary decision-making and interactions with teams in work environments. Similarly to what happens at strategic level, some managers might select organizing options that drive the actions of their teams towards one or the other pole (with no conscious thought about the other), while others abstract both poles as a duality. We are not aware of studies that take this meso level organizing perspective on the duality standardization/adaptation and aim to explore this blind spot in international management research.

Dualities are deeply studied in recent research because there is accumulated evidence of backfire of decisions that overemphasize one pole, with subsequent tensions that require action on the other. In fact, managers might trigger vicious circles in the organization because the undervalued pole can manifest in unwanted outcomes (Tsoukas & Cunha, 2017). For example, organizing the work of teams by replicating the same reporting process in all geographies ("standardization" from the point of view of managers) may imply great change to teams that operated with different local practices. Resistance of local teams may backfire with tensions that uncover the need to adapt the reporting process to local practices. Similarly, the pole of "adaptation" might be pursued by managers that prepare meetings with different communication styles to better connect to local expectations, but do not consider what this means to the organization in terms of identity. The loss of a common language in the organization may backfire by creating tensions that uncover the need to standardize elements of communication to create a recognizable identity across the world. These organizing endeavors emphasize the opposing poles by considering them as separated options, and thus tend to push the organization towards cycles that require action on one or the other pole (Smith & Lewis, 2011). Some managers are alert to the tensions among poles and consider them as a pair of imperatives that are equally important but in conflict with one another (Birkinshaw et al., 2016; Fredberg, 2014). When aware of the importance of both

poles, managers can address them with different strategies, by making either/or decisions and separating different configurations of actions in space and time, by making short-time options but keeping both poles alive with balancing acts, or by delegating the need to cope with both poles to their teams (Smith, 2014; Smith & Lewis, 2011). All strategies may seem insufficient and frustrating to managers. By selecting one option they might create unintended tensions, and by delegating the options to teams they might leave high ambiguity in decisions, which can hinder effectiveness in collective action or increase the need of reorientation (Abdallah & Langley, 2013; Lewis, 2000).

Research on management dualities is setting the rules to become a meta-perspective on theories about contradictions and tensions. Its differentiated contribution to management research comes from finding similarities in the way managers (and researchers) cope with different types of dualities (Putman et al., 2016; Schad at al., 2016). This perspective has been recently articulated as a shift from contingency theories (emphasis on separated options) to interdependence theories (emphasis on how options are related) (Smith et al., 2017). Facing a common challenge to nascent fields, this literature needs to connect the meta-theoretical discussions with concrete organizational realities, and thus calls for more empirical research. If not supported by empirical studies that shed light on how dualities instantiate in concrete situations, the field can become too abstract and lose its value for management and managers. With research in the international context, we address the lack of empirical studies, thus preventing this field from becoming too abstract and acontextual.

Studies on management dualities are interested in the heterogeneity and complexity of international business contexts (Lewis, 2000) and standardization/adaptation is used in this field as an example of a strategic duality that can be addressed with different options (Birkinshaw et al., 2016; Fredberg, 2014). However, while both fields share a concern with how managers cope with conflict and complexity, they remain isolated in their research. We

argue that international management research can use the insights of the interdependence perspective on dualities to better understand how managers cope with several conflicting demands (that may or not be specific to international contexts), and how they interplay among them. These different views are helpful to understand how standardization/adaptation can be faced as a dilemma when approached with either/or strategies, a dialectic when faced as two interrelated elements that can be transcended with an analytical synthesis (Clegg et al., 2002; Hargrave & Van de Ven, 2017), and a paradox when the contradictory elements exist simultaneously and persist over time (Smith & Lewis, 2011).

Our main interest is in the dynamic decision-making processes that were developed to explain how dualities may be faced differently in different situations but sustained through time in the organizing endeavors of managers (Eisenhardt et al., 2010; Smith, 2014). These models use two concepts that are important to integrate in international management research. The first is the concept of "salience", which states that actors might or not be aware of dualities when selecting organizing options, and that their awareness to the interrelation of opposites depends on individual and environmental conditions (Smith & Lewis, 2011). This is useful to explain how standardization/adaptation might become salient to managers in different situations. For instance, managers might wish to organize the work of their teams to strictly follow the corporate guidelines on how to present a request to the IT department, but by observing the practices of teams, understand that the guidelines require online communication and local teams tend to use live communication. It may seem necessary but impossible to simultaneously follow the corporate guidelines (standardizing) and respect the local communication style (adapting). Salience to the duality is thus raised by cognition (the manager thinks about options) and socio-material conditions (patterns of behavior in that particular environment). The second important concept is the "pervasiveness" of the duality in the organization, which states that both poles might be sustained in a dynamic relation in

the long run, even when short-time decisions tend towards one or the other. In the example above, managers might achieve "standardization" and "adaptation" in the long run by sometimes encouraging teams to use online communication to report specific IT issues (standardization), and sometimes inviting the IT department to participate in live meetings with local teams. In this sense, they select one or the other pole in specific situations but balance both poles in the long run. The concepts of salience and sustaining dualities can be applied to international management research to understand how managers seem to prefer different strategies in different situations, thus introducing a deeper consideration for contextual features in management decisions.

Regarding the individual abilities required by managers, research on dualities brings insights on how managers use complex cognitive structures to become aware of, and address, dualities. These abilities have been described as differentiating and integrating (Smith & Tushman, 2005), reframing and transcending (Bartunek, 1988; Denison et al., 1995), paradoxical thinking (Smith & Tushman, 2005), paradoxical vision (Andriopoulos & Lewis, 2009), and ambidexterity (Smith & Tushman 2005). Developed in the field of international management, the concept of "global mindset" is similar in many ways but has been articulated separately. Global mindset stands for a set of mental processes characterized by an openness to and articulation of multiple cultural and strategic realities on both global and local levels, and the cognitive ability to differentiate/integrate across this multiplicity (Clapp-Smith, & Lester, 2014; Gupta, & Govindarajan, 2002; Levy et al., 2007; Story et al., 2014). These mental processes allow individuals to better understand the trade-offs and synergies underlying the duality standardization/adaptation at both strategic and interactional levels. Although similar in the importance given to the differentiation and integration of different realities, each field proceeds unaware of the research entailed in the other. We are interested in exploring synergetic insights that may be raised in the intersection of findings, but

primarily in addressing a common challenge of both fields, coming from an overemphasis on studying cognitive mechanisms (Schad et al., 2016).

As individual sensemakers, managers understand dualities by using observation and interpretation, which combine cognitive and emotional processes. When research focuses on the first, it tends to describe highly analytical processes and overlook the emotional processes that triggered the development of complex abilities used to address dualities. The literature on management dualities shed light on a few emotions related to dualities. It describes how managers use concepts and schemas organized with specific consistency criteria as filters (frames) in the construction of meaning, and how most frames developed in the context of management (especially in the Western world) praise for linear thinking (Maitlis & Christianson, 2014; Weick, 1995). Dualities are violations to linear thinking, and when managers abstract the conflicting demands and try to integrate them to organize actions, their managerial frames may not be adequate or sufficient to interpret them. Studies on paradoxical tensions consider the existence of emotional threats such as frustration, blockage, uncertainty, and paralysis arising when managers face dualities (Lewis, 2000; Putnam et al., 2016; Smith & Lewis, 2011). A recent study on the interplay between intuition and rationality in strategic decision-making brought insights on how the development of paradoxical frames allows decision-makers to engage productively with tensions and overcome the deep sense of discomfort often associated with it (Calabretta et al., 2017). There is usually no reference to positive emotions associated with the processes used to cope with management dualities.

The lack of longitudinal studies poses challenges to both fields, because short-term empirical studies usually describe how managers cope with episodes that render salience to one type of conflicting demand, and in this way may assume that they tend to address different episodes with similar strategies (Smith, 2014). One can imagine that some managers will address each instance of a duality as a discrete phenomenon, while others will

understand the conflicting demands as ongoing tensions (Lewis, 2000). In international

contexts, managers may be constantly pressured with manifestations of

standardization/adaptation when organizing the work of different teams, and uncovering the

cognitive processes they use to address each manifestation may not be sufficient to explain

how they face them over time. Interdependency approaches to dualities bring different views

on the nature of the relation among poles, and thus might inform international management

research with important insights (Smith et al., 2017).

5.4. METHODOLOGY AND EPISTEMOLOGY

The methodological design of the study was informed by our epistemological and

ontological stand but also constrained by the specific research context. Deciding how to study

the flow of individual experiences of managers in the international business context is

challenging, as the interactive, emergent, and evolving aspects are difficult to observe and

capture as they unfold (Czarniawska, 2008). Even if researchers were to become the

managers' shadows, they would not be able to understand the different languages and see the

conflicting elements arising in their interactions with teams in different geographies. As a

result, researchers must rely on observation and interpretation from the managers themselves.

Qualitative methodologies are well suited to study the dynamic processes comprising

individuals' interpretations as they examine the issues from the perspective of the

participants, rather than from that of the researcher (Weick, 2012). These methodologies have

been requested as a means to enrich the study of management in international business

contexts (Birkinshaw et al., 2011; Gertsen & Søderberg, 2011).

Our epistemological and ontological stand affected the interviewing technique and the

way it was articulated with other research methods to build theoretical insights. Drawing on

process philosophy (Langley, 1999; Tsoukas & Chia, 2011), we see the world from a relational perspective, not made from stable entities, but as a flow of interlocked events, activities, and life experiences. We use this perspective to complement current etic approaches used in international management research, which are not capable of explaining how the inner perspectives of managers transform along time. How do managers experience the instantiation of dualities in concrete situations? Do they see the different instances connected under a single abstracted duality or do they see each instance as a different turning point? Are these positive or negative experiences to them? Do all managers follow similar paths? As we decided to use the managers as our main informants, we chose in-depth interviewing as a technique to uncover the way they experienced the manifestations of the management duality over time. To complement the analysis, we also conducted direct observation as a process ontology emphasizes the importance of also observing the real-time practicing (Langley, 1999; Tsoukas & Chia, 2011).

Our primary data sources were in-depth interviews with 20 managers filling international roles for more than one year (international management roles and tenure on these roles is described in Table 5), direct observations of work sites in two countries and of three management team meetings (20 hours), and analysis of secondary written data from each participant's curriculum vitae and internet descriptions of organizations and contexts. We continued data collection until it reached a manageable quantity and conceptual saturation. Our aim was twofold, as we intended to thoroughly understand the experiences of managers in concrete situations and identify possible patterns that point to changes in their understandings over time. To achieve this objective, we combined narrative analysis with visual mapping, two data analysis techniques that are adequate to build process theory (Langley, 1999). The 13 years of professional experience as a management consultant of one of the researchers was used to perform the different context analyses on organizations and

businesses and to prepare for the interviews. The analyses were documented and discussed

with an enduring dialogue with the other researchers, both experienced in the fields of

international business and management dualities' research.

In-depth interviews were chosen as the primary data collection method to allow the

managers to voice themselves to us as they are the only permanent observers of their

experiences when coping with conflicting demands over long periods of time. Interviews

began with open-ended questions about the overall experience of management in

international roles over time. These questions were used to set the context in which lived

experiences were requested: "Can you describe personal experiences to illustrate what

happens(ed) when you organized the work and interacted with your direct teams across

geographies?". The participants were not asked to describe specific dualities, as our intention

was to let them focus on what they felt as more important. In Table 5 we present examples of

the organizing challenges they described. The interviews lasted on average 1.5 hours each

and were audio-taped, and transcribed verbatim. Observation comments about behavior and

work sites were added for context. Overall, the raw data amounted to about 520 single spaced

written pages.

Table 5. Summary of data collection (Study 2)

Subject	International Management Role	Examples of instantiations of the duality standardization/adaptation, while organizing configurations of actions of direct teams located in different geographies
M1	Project Manager (tenure > 10 years)	Integrating the accounting processes across the world while adapting communication to each team operating from different locations.
M2	Director (tenure > 20 years)	Integrating the reporting and control procedures while adapting work habits and communication to different teams (more than 20 locations).
M3	CEO/ Owner (tenure > 20 years)	Selecting the "right" organizing model to each new location (separating options in space and deciding on the best configurations in each new situation).
M4	Marketing Manager (tenure 5 years)	Integrating communication (to respect the Japanese style) while adapting knowledge collection to local practices.
M5	CEO (tenure > 5 years)	Integrating the formal structure with shared services (standardizing back-office processes) and (sometimes) adapting work to local practices (mostly when teams operate in front-office).

Subject	International Management Role	Examples of instantiations of the duality standardization/adaptation, while organizing configurations of actions of direct teams located in different geographies
M6	Director/ Owner (tenure 5 years)	Integrating formal work practices in global frameworks to ensure quality of service while promoting diversity in informal relations to promote cohesiveness of teams and global identity.
M7	Director (tenure > 10 years)	Promoting cultural similarity in the organization (a "multicultural young environment") while allowing local expressions of difference (through communication styles and work arrangements).
M8	IT Manager (tenure > 5 years)	Integrating formal work practices in global frameworks that disconnect from local hierarchies while adapting communication and power games to local habits.
M9	Project Manager (tenure 2 years)	Integrating the CRM processes across the world while adapting communication and development practices to local habits.
M10	Operations Manager (tenure > 5 years)	Promoting cultural similarity in global hubs ("universal work habits") and adaptation of leadership styles to local offices.
M11	CEO (6 countries) (tenure > 20 years)	Promoting value coherence among teams operating across regions while adapting leadership style to meet local expectations.
M12	CEO (tenure > 10 years)	Promoting value coherence among all managers and delegating the need to cope with different organizing options to local managers.
M13	Marketing Manager (tenure > 5 years)	Integrating reporting on sales and marketing activities while adapting communication and leadership to local expectations.
M14	Finance Manager (tenure 1,5 years)	Integrating financial reporting and formal communication across the EMEA region while adapting informal communication to local expectations.
M15	Project Manager (tenure 5 years)	Integrating formal work practices in global frameworks to ensure quality of service while adapting communication to local habits.
M16	CEO (tenure 10 years)	Blending different practices to create global frameworks while adapting communication and leadership style to local expectations of teams.
M17	Finance Director (tenure > 5 years)	Integrating financial reporting across the world while adapting communication and leadership styles to local expectations.
M18	Marketing Manager (tenure > 5 years)	Integrating reporting on sales and marketing activities while adapting communication and leadership to local expectations.
M19	Marketing Manager (tenure > 10 years)	Promoting cultural similarity in global hubs ("multicultural environment") and adaptation of leadership styles to local offices.
M20	Project Manager (tenure 5 years)	Integrating reporting processes across the world while adapting communication and development practices to local habits.

Data analysis began during data collection and entailed four steps with a recursive hermeneutic process-oriented perspective (Langley, 1999; Rennie, 2012). The first step was narrative analysis (Gertsen & Søderberg, 2011; Langley, 1999). We identified four different narratives that describe the way managers experience the duality standardization/adaptation. These narratives allowed us to recognize four distinct moments and identify the sensemaking structure used by managers to interpret and deploy the duality in each. In a second stage of analysis we used visual mapping as an intermediary step between the narratives and a more

abstract conceptualization (Langley, 1999). This allowed us to introduce a notion of precedence and time flow to connect the narrative moments and to focus our interpretation in uncovering the cognitive and emotional processes that drive managers from one moment to the next. The third step was to bring these analyses together with a more detailed literature review to discuss how our findings relate to current models on international business and management dualities. As a last step, we cross-checked our interpretations with data by re-reading through the transcripts and observational field notes.

As we aimed to integrate the literatures on management dualities and international management, we started by using the findings to validate and develop insights from interdependent views on duality management (Smith et al., 2017) and subsequently bring these developments to explore current theories used in international management. The discussion is not completed without an open consideration to our use of analytical distinctions. In fact, while we stand for a process ontology, we not only use dualities such as global/ local and individual/ collective in our arguments but also abstraction/concrete as different sensemaking operations, as if restoring a mind/body duality. We would like to clarify that this is an analytical device used to discuss important phenomena that are nevertheless intrinsically connected. To understand others' ideas and the empirical world, written research is also captive of a dual and abstracted way of expressing, which should in no way prevent researchers from mushing everything again to entwined realities in their readings.

5.5. FINDINGS

While all managers identified organizing options towards standardization, adaptation, or both in their narratives, some do not consider both options as interconnected elements of a

duality, and others describe different ways of understanding the duality in different situations.
We found explanations for the different ways of experiencing in the concepts of salience and
pervasiveness introduced by dynamic and interdependent perspectives on dualities (Smith,
2014; Smith & Lewis, 2011), and on the use of individual abilities that managers develop
through time. We explain our findings below.

5.5.1. How contradictions become salient to managers: designing vs enactment experiences

Dualities are brought alive in interpretive processes but they are also instantiated in
practices, arrangements, and artifacts (Hargrave & Van de Ven, 2017). It is thus not
surprising that our subjects report that they became aware of contradictory organizing options
in experiences that privilege abstract reasoning and socio-material elements present in
concrete situations. As organizers of collective action, managers engage in decision-making
situations that happen apart from the actions of their teams and in which organizing is mostly
seen as a design practice (abstract reasoning and discourse), and in situations of interaction
with teams, when organizing is seen as real-time enactment. It was surprising, however, that
only some managers seem to try to connect their abstract reasonings with the concrete
elements. In other words, as designers of configurations of actions, managers may articulate
one or both poles of the duality with concepts but show no deep consideration on how they
manifest in actions. Others learly state that to understand the organizing options they must
overcome "the layers that separate us from reality" [M2]. These managers feel the need to
concretize the conflicting options in terms of how they manifest in the "non-verbal" [M6,
M7], "behavior" [M1, M4, M5, M6, M8, M9, M17], and "little details" [M2] in the actions of
teams. We identified two narrative patterns that show different flows from more abstract

reasonings to more concrete experiences and vice-versa, which we illustrate with exemplary cases from two subjects.

Narrative pattern 1 – The designer: Managers face conflicting organizing options when making decisions on how to orchestrate actions around the world and imagining how those options can be deployed into practices of teams. M1's narrative is an example of this pattern. She describes her experiences toward the goal of "aligning finance processes across the world". Using interpretive frames developed in her role of manager, she recognizes that "aligning" entails standardization/adaptation as competing alternatives. Using interpretive frames developed through her specialization in finance, she questions which activities need standardization, adaptation, or both, and understands that local teams will need to learn new procedures. When designing this learning process, she uses knowledge on psychology to establish a link between learning and communication, and knowledge developed in her cross-cultural experiences with different teams to identify divergent communication practices around the world. She then concludes that "to align the finance processes I have to standardize the procedures but adapt the communication" and explains how she does it with very detailed descriptions of interactions with different teams. Not all managers describe the process of deployment of decisions to actions, and instead stop the narrative in their role in selecting the organizing options [M3: "Every time we open a new office I decide which is more important, should we do business as usual or adapt the procedures to local habits? Then I explain my option to the team… they know how to proceed"].

When using this narrative pattern, managers start by discussing the duality in highly abstracted terms and may continue their narratives to describe the concrete situations in which the organizing options instantiate. In this way, the contradictory organizing options become salient to managers through the use of analytical processes and imagination (envisioning configuration scenarios). Some narratives keep this reasoning at high abstracted

levels and managers do not seem to understand how concepts become actions. We understood from this narrative pattern that the link to situated actions is not direct or clear, requiring that managers move along levels of abstraction to link the conceptual options with the concrete situations in which they manifest in actions. This narrative pattern shows that managers may interpret the opposing options with mere conceptual manipulation, and that to deploy the design options into concrete actions, they may need to deconstruct different meanings in their own interpretive frames (e.g. differentiating financial procedures to decide which activities will be standardized/adapted), and reconstruct meanings in different frames (e.g. integrating knowledge on different practices to decide on how to adapt communication styles).

Narrative pattern 2 – The enacter: Managers constantly observe conflicting practices/behaviors in concrete situations and try to understand if and how they impact organizing options. In this process they also move along levels of abstraction to deconstruct/reconstruct meanings and may build conceptual dualities. One example is given by M10 as he describes a conflicting behavior among team members: "One example is getting on time to meetings... English people comply but not Spanish and Italian (...) I believe there are universal work habits that should be followed by everyone to increase efficiency! I am always trying to balance adaptation to local habits with a need for work efficiency." At first the manager is surprised because conflicting configurations of actions manifest in the environment, and tries to understand why. He abstracts behavioral patterns from concrete situations to differentiate practices and integrates them with previous knowledge on how individuals from different cultures act. He believes it is not possible to accommodate both practices in the organization (they refer to different uses of one resource, time), as under his managerial frame, "work efficiency" is associated with standardized behaviors. This reasoning renders salience to the duality standardization/adaptation, which becomes a balancing requirement when he considers his role of organizing agent.

Narrative Pattern 2 shows that when managers observe conflicting organizing options in situated actions, they move through levels of abstraction and use different interpretive frames to make sense of them, eventually connecting the options under one duality to consider when designing configurations of actions. Managers who used this narrative pattern observed the conflicting practices or discourse directly in concrete situations, deconstructed and reconstructed meanings to recognize that opposite options are interrelated (they use the same resource), and brought them together as a duality using highly abstracted concepts such as "efficiency" and "balancing". In this way, the duality became salient through the use of analytical processes, but also through the use of sensory and emotional processes in concrete situations in which contradictory socio-material elements manifest.

Both narrative patterns validate current literature on management dualities, which explains how individual sensemaking is enabled by complex cognitive structures that use reframing and transcendence (Denison et al., 1995; Putnam et al., 2016). Reframing is a cognitive operation that displaces sensemaking from one interpretive frame to another, allowing a conscious decoupling and recoupling of meanings with frames. Transcending is a cognitive operation that displaces the subjects from the inside (see *through* a filter) to the outside (see *the* filter) of interpretive frames, thus building new possibilities for meaning outside the previous frame. Narrative Patterns 1 and 2 show the use of both operations to organize the collective actions of teams, but also show how many such operations might be needed to address one duality. Our empirical data thus confirm current theories on management dualities that take reframing/transcending as an important ability to cope with dilemmas, dialectics, and paradoxes (Putman et al., 2016; Smith & Lewis, 2014), and extends them by revealing: how this ability requires deconstruction/reconstruction of meanings through several layers of abstraction; how some managers cope with dualities as mere abstractions with no conscious effort to understand how the design options will manifest in

concrete actions; and how dualities can become salient through analytical but also emotional processes, when managers are participants/observers of situations in which contradictory elements manifest. The data thus show that managers make sense of the duality standardization/adaptation as designers that envision, select, and deploy options into practices, arrangements, and artefacts, and/or as enacters of situated environments in which conflicting options become salient in practices, arrangements, and artefacts. Both roles can be connected with many layers of interpretation that require complex cognitive processes.

5.5.2. How dualities are sustained over time: discrete vs pervasive salience

When zooming in on specific situations, we could see that the same manager may perceive the duality as a dilemma in the sense that each pole is pursued as a separate option [M10: "Sometimes I demand that everyone follows the work habits I consider universal, and sometimes I let them follow their local habits"] and other times connect both poles as interdependent needs to be addressed with balancing acts [M10: "I always try to balance both needs"]. We did not find patterns in their preferences over either/or or both/and strategies to address the duality, which is aligned with the dynamic models on strategic decisions developed in the management dualities literature. While distinguishing the concepts theoretically, they consider shifting patterns and the co-existence of dilemmas, dialectics, and paradoxes in decision-making processes over time (Eisenhardt et al., 2010; Smith, 2014). We found a pattern instead in the way managers understand their organizing role over time. In Table 6 we present a summary of the findings from the narrative analysis in a timeline that carves out four different moments in which their interpretations seem to change.

Table 6. Different ways of experiencing the duality "standardization/adaptation"

	Contradiction not salient to managers	**Dual demands are solved instance after instance**	**Duality is pervasive in the environment**	**The environment is enacted through multiple dualities**
☐ Concrete situations ● Instantiation of poles ■ Integration of instantiations in interpretation				
Sensemaking strategies	Use (previously generated) expectations to guide interpretations	Face dual demands as problems when they instantiate in discrete situations	Abstract duality from discrete instances and find ways to address ongoing manifestations	Face environment with awareness that dualities are social constructions
Support of sensemaking	1. Legitimized heuristics 2. Best practices	1. Discrete manifestations 2. Discrete solutions	1. Possible manifestations 2. Possible practices	1. Plural enactments 2. Mindful interactions
Organizing is	Regulation	Problem-solving	Possibility-seeking	Translation
Data (illustrative quotes)	M2: "The tendency is to expect that people will behave in the same way as your previous teams did, so you keep repeating what you did before (…) but this is not always possible" M6: "Most times I operated with autopilot, I did what I always did and did not question it (…) that was enough"	M8: "I am a problem-solver (…) I go from situation to situation and genuinely change the way of thinking and acting. Sometimes I ask teams to follow rules, sometimes I adapt to them… I solve the problems as they appear." M14: "In what comes to company rules I asked them to follow central directions, and on cultural habits I adapted to local practices (…) I tried to understand the differences to adapt"	GM1: "Exposure to many different projects, cultures, ways of thinking (…) Sometimes you follow global frameworks, sometimes you adapt (…) You absorb and mix experiences" M12: "When you are operating across eleven cultures (...) you don't standardize nor adapt to all. You constantly balance (…) don't make everything similar but develop a common set of general values, common understandings"	M2: "My vision of the world changed (…) things are different when I go back, all seems constantly changing (…) my team is everything, I am nothing without my team (…) they translate and guide me" M6: "You start to observe, not to see but to observe (...) People use different filters to see reality (…) I try to observe the world not only through my eyes but also through theirs (…) I cannot do this alone (…) my team helps"

The first narrative moment was not heavily described by managers but they used it as a discursive device to introduce the second moment. They operated with low awareness to conflicting demands in the beginning of their international roles, organizing work according to legitimized heuristics and best practices learned in their earlier local roles [M1: "The Company prepared frameworks that helped us in every decision. I just applied them. They are very detailed, there is no need for questioning. It works!"]. We interpret that they understand their role of organizing collective action as one of "regulation", integrating new situations

with previous expectations that are not consciously questioned. They contrast this moment with the next, at which they connect standardization/adaptation as conflicting demands that manifest in discrete situations. This moment arises with the sense that known heuristics and best practices are not enough to address the challenge [M13: "When I got there I just did things as in the headquarters… until I saw the confusion of the teams, and realized this was not working"], which requires the articulation of two organizing options: proceed as always in different locations (standardize) and/or understand local practices and rearrange actions to match them (adapt).

Organizing options towards standardization, adaptation, or both became salient in discrete situations because managers became aware of contradictions related to global/local "goals" (all managers), "requirements" [M20], "reference points" [M3, M5], "perceptions" [M1, M2, M6], "values" [M4, M12], "concepts" [M11, M12], "expectations" [M14, M15, M17], "emotions" [M6, M11], and "routines/actions/habits" [M5, M10, M12, M14, M15, M20]. As explained before, the contradictions arose both in decision-making processes that use abstractions to compare scenarios, and in socio-material elements present in situated interactions with teams. Initially, managers tend to address what they perceive to be dual demands as a problem to be solved in that particular situation [M3: "I had to decide which was better"]. We interpret that they understand their role of organizing as one of "problem-solving", by isolating each instantiation of the duality and finding best ways to address it [M3: "We had to decide how to proceed to each country, what to repeat and what to adapt… each trip is a trip and we decide which is the best way to go"]. Managers do not seem to connect discrete events as instances of a single duality that manifests over time.

Two thirds of the managers go further to describe a third moment, when they condensate different instantiations of standardization/adaptation into one narrative, which leads them to perceive the duality as a pervasive challenge in the environment [M6: "It kept

coming back… it's like I can't decide which option is best"]. Instead of searching for linear

solutions, their organizing role is understood at this moment as "possibility-seeking", opening

the sensemaking processes to find possible ways to cope with both poles of the duality and

address their different manifestations [M2: "I combine and balance"; M16: "integrate parts of

one in the other"]. Our study did not reflect on the individual characteristics that led only

some of the managers to describe these moments. Instead, we identify the cognitive and

emotional processes that managers seem to use to go from one moment to the next (described

in the next section).

In a fourth moment, managers frame standardization/adaptation among several other

management dualities and seem to change the way they see their place in organizing

endeavors, from the primary organizer to one of several possible organizers. They go from

seeing *one duality* as a contradiction to be addressed, to seeing *the environment as enacted*

through multiple contradictions that are socially construed by them and their teams, and from

seeing themselves in the center of organizing processes to seeing themselves in the role of

"translators", using multiple interpretive frames to connect different views on many dualities

[M6: "Global/local, repeat/innovate, to-lead/to-be-led… people see the world through

different filters and we can't predict what will happen… so I try to prepare myself and the

team for different futures"]. They report how dualities assume different forms to different

agents. For instance, managers may organize collective action towards standardizing the

practices of teams operating in different locations. In their view, this organizing option

creates efficiency through replication. But their teams might see it differently, because in fact

they might be required to change their previous practices, which creates inefficiencies.

Similarly, when managers organize collective action towards adapting the practices to local

expectations (introduce change across the globe) they may in fact be asking the local teams to

replicate (to do things as they always did). Opting for one pole will rise pressures from the

other because acting similarity at global level requires effort of change at local level, and vice versa.

One quarter of managers reported this moment, describing how the world is polarized and how poles have different meanings to different actors. To cope with this plural world, they consciously articulate the dual role of designers and enacters and emphasize how this is not a process that they can entail alone. Their teams are seen as an extension of their internal sensemaking processes particularly relevant to (re)connect them to the concreteness of situations [M2: "I see management as the combination of concept and detail. We have to be able to understand the situations with concepts but never forget the little details that make them"; M6: "You train yourself to become more mindful, increase the ability to be aware for longer times in situations, recognize your behavior and that of others, and do this instinctively (…) I constantly try new ways to engage in a productive dialogue with teams, because ultimately they are my eyes in the field"]. This finding suggests that the development of sensemaking processes that allow managers to cope with one type of duality may over time change the way they face all dualities. The connection of international business literature with broader theories on dualities can thus be beneficial, because they bring more comprehensive views on the interrelatedness of opposites (Smith et al., 2017).

5.5.3. Processes used to cope with dualities over time

To make sense of how managers go from one moment to the next we used a visual process schema (Langley, 1999) presented in Figure 3. It results from an inductive process that recursively connects analysis and literature review, but we display it at the beginning of the section to provide clarity and structure for the reader. The schema shows that managers start by experiencing sensebreaking when coping with dual demands, which triggers

interpretation processes based on cognition (deconstruction/reconstruction of meanings and

self-reflection) and dialogue with teams. Emotional tensions can also arise with

sensebreaking and may have positive or negative consequences to the way managers face

dualities, but tend to decrease over time.

Figure 3: Theoretical model: Interpretation and enactment of dualities over time
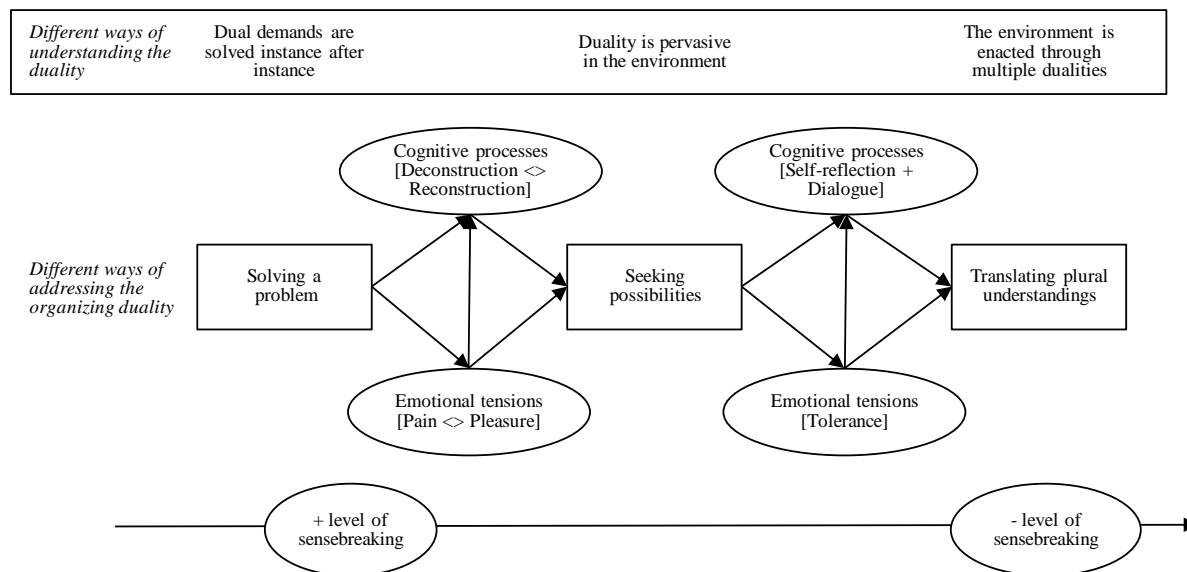
Making sense of contradictory options over time. When moving from the first

narrative moment to the second, some managers describe a breakdown in their sensemaking

processes [M6: "in the beginning my brain tilted, I paralyzed, I could not make sense of it"].

This sensebreaking event is explained in the management dualities' literature. Because their

managerial frames were not built to handle dual demands, managers did not expect the

opposing elements to manifest simultaneously, and consciously experience sensebreaking

(Lewis, 2000; Maitlis & Christianson, 2014). The narratives, however, describe larger

sensebreaking when the contradictory elements are enacted in concrete situations, when

compared to design acts. In fact, when organizing is experienced as a mere act of design,

sensebreaking was not described. Discussing contradictions without experiencing them in socio-material environments does not seem to cause much confusion to managers.

Current literature emphasizes the role of cognition when coping with dualities (Schad et al., 2016), and we found support for different cognitive processes. When managers face the dual organizing options as problems in discrete instantiations of the duality (Moment 2), the individual cognitive processes of deconstruct/reconstruct meanings described earlier seem enough to find a solution and close the cognitive tension, and managers do not seem to employ further cognitive work. However, when the duality continues emerging over time and they realize it "cannot be solved" [M6], they become aware of standardization/adaptation as an enduring duality in the environment (Moment 3). In their narratives, this awareness stems mostly from direct and prolonged exposure to situations that represent extremes of each pole, as they worked in global hubs, in which the need to standardize is emphasized, and in local contexts, in which the need to adapt becomes salient. They recognize that accepting the duality as an enduring challenge takes time [M1: "I lived for years in both environments, it was the experience"; M11: "It took me one year to understand this"].

The realization that the duality is pervasive triggers additional interpretation to move forward. Our data suggest that managers engage in interpretive processes based on both self-reflection and increased dialogue with teams. The literature on management dualities describes how coping with opposites ignites creativity and questioning self-assumptions (Hargrave & Van de Ven, 2017), which we found evident in the data. Managers mention "questioning myself with an open mindset" [M17], "self-reflecting" [M2] and "spent a lot of time questioning my perceptions" [M6]. The need to engage in self-reflection seems to arise from their previous emphasis on the "possible", which extended the set of concepts/schemas used in sensemaking and uncovered the interpretive frames that underlie them [M16: "seeing these many possibilities made me realize how people are blind to their own filters"].

Additionally, the data also shows that they often realize that they lack concepts/schemas to understand the conflicting requirements on their own, and thus mention the need to "listen" [M2, M6, M12], "question others" [M5, M12, M17, M19] and "discuss with peers" [M14], as important elements of interpretation [M2: "I cannot understand it without my team… I am nothing without my team"]. Our data reveal that the use of these abilities may transform the managers' perspectives in such a way that they become aware of a plurality of dualities, not restricted to the international business context (Moment 4). This supports the value of developing a field that connects different types of dualities (Smith et al., 2017).

Developing emotional equanimity. Alongside the cognitive tensions that are addressed with deconstruction/reconstruction of meanings and with self-reflection and dialogue, the data reveal that coping with dualities can create emotional tensions. Contrary to what some literature implies, however, this is not always, and not necessarily negative. Current literature often stresses the existence of negative emotions associated with sensebreaking (Lewis, 2000; Smith & Lewis, 2011). In our subjects' narratives, the triggering of emotions depends largely on the sensebreaking event and thus on how they face the contradictory options as designers or enacters. When dualities are considered at an abstract level and managers do not try to connect them to concrete actions (designers), their narratives do not describe emotions [M3: "We decide on the Board what to do and the teams implement it"; M7: "We discuss the goal at Board meetings and decide, that's it"]. On the contrary, when describing how the conflicting elements manifest in concrete situations (enacters), emotions play an important role [M13: "I felt really confused… nothing seemed to work… meeting after meeting… teams could not understand what to do"; M14: "I felt shocked, outraged, confused"].

This confusion and associated frustration, blockage and paralysis have been identified in the management dualities' literature, and connected to the sensebreaking that is

experienced when expectations of linear resolution are not met (Smith, 2000; Smith & Lewis, 2011). Our data extend this understanding by indicating that negative emotions are enhanced when managers complement the analytical reasoning about options, with the effort to observe their materialization in concrete situations, and that the more they are participant actors or direct observers in concrete situations, the more emotional processes are emphasized [M2: "when you see it you can feel it"]. We do not wish to say that managers stop using emotions in their role of designers, but only to argue that their exposure to concrete socio-material elements might increase sensebreaking. The separation between analytical ways of thinking about conflicting elements and more emotional ways of understanding what they mean in concrete situations is probably more visible in international business contexts when compared to others, because managers make many decisions away from their teams. This makes this context important to management dualities' theory, as it uncovers processes that might be hidden in other contexts, as even when sharing a physical space, managers and teams increasingly interact through technology, which might be disconnecting them emotionally from the concrete experiences of their teams.

One important finding brought by other data is the evidence that coping with conflicting demands can be both a source of pain and pleasure. Managers report positive emotions related with the enthusiasm with complex puzzles [M2: "Yes, it is difficult, but I love it! Nothing compares to this possibility of continuously learning new ways of doing things"; M17: "enthusiasm… the curiosity and interest of seeing something anew"] and even pride for being able to do it [M5: "I immediately thought of my family, of telling them how I was able to pull through"; M6: "We are at the top, no profession is like ours!"]. These positive emotions increase engagement with the complexity of the organizing role [M8: "I cannot imagine going back to a local management role, where making decisions can be really boring"]. Our study is thus in line with current literature that toggles the positive side of

coping with uncertainty and ambivalence, because although uncomfortable, it has the potential to foster growth (Ashforth, Rogers, Pratt, & Pradies, 2014). This contributes to the literature on management dualities, which tends to emphasize the negative emotions and neglect the positive.

The data also show that over time the importance of emotions can decrease, because the sensebreaking effect decreases from the second to the third moment, when managers stop looking for solutions and start looking for possibilities [M6: "In the beginning it was an additional stress factor. Today it isn't anymore"; M17: "I got used to it… I remember thinking about it when I came out of a meeting, and I don't do that anymore"]. When comparing their initial experiences in the international business role with their current ways of being, managers realize that they developed a sense of tolerance toward themselves and others [GM6: "Some situations were really frustrating (…) I entered a 'damage control' mode, started to pay special attention to my reactions, and became more tolerant with myself and others"], which enables them to approach conflicting elements as "a challenge, not a problem" [M12]. This does not imply that they stop being surprised by illogical demands, but instead that they de-couple surprise from the stress that usually comes with it [M6: "Today I do not find it strange anymore. I just assume I am not able to see what underlies it and I try harder to understand"; M14: "I still get surprised, but now this is the normal"]. This realization is also important to the management dualities literature, which predicts the importance of emotional equanimity to embrace paradoxical challenges that are sustained through time in the organization (Smith & Lewis, 2011).

5.6. DISCUSSION

The organizing duality standardization/adaptation has been largely studied in international management (Bartlett & Ghoshal, 2002; Benito et al., 2014; Devinney at al., 2000) but the impact of managerial interpretations in addressing the duality is understudied (Maitland & Sammartino, 2015). To complement this research, we bring the literature on management dualities, answering a call for interdisciplinary research in international management (Brannen & Doz, 2010; Cheng et al., 2011). In the findings section, we offered empirical support and developments to the literature on management dualities. Our intent now is to point interesting developments to international management theory that can arise from the consideration of this literature. International management research has produced several studies on how to address standardization/adaptation as a problem to be solved with different strategies that should be selected according to contextual factors (Bartlett & Ghoshal, 2002; Devinney et al., 2000). The literature on management dualities defines this as a contingent view on dualities, as the focus is on the poles, and offers a different perspective that tries to understand how opposite options are interrelated (Smith et al., 2017).

Confirming earlier studies on management dualities, our study of international managers as organizing agents concurs with dynamic models that show managers shifting decision patterns, and sustaining both poles of a duality in the long-term with short-term choices in favor of one pole (Eisenhardt et al., 2010; Smith, 2014). These models are focused in the interpretive processes used by managers as selectors of organizing options, but do not explicitly consider their role as enacters of contradictory practices in concrete situations. We extend this literature by uncovering the dual role of managers as designers and enacters, showing how complex cognitive processes, but also emotional tensions, raise attention to the interrelation of poles (with sensebreaking and frustration), but also keep managers interested in the complexity of organizing dualities (with enthusiasm, pride, and emotional equanimity

in the long-run). The combination of our findings with the literature on dualities, challenges current research that explores the options on standardization/adaptation with static descriptions and normative recommendations on how to address them (Benito et al., 2014).

The data confirm that some managers recognize the intertwinement of opposites and the importance of facing them (Smith & Lewis, 2011), but also show that recognizing the interdependence from the point of view of the designer might not be enough to deploy the duality to organizational life. If this recognition happens exclusively at the analytical level, they may not understand what the organizing options mean to different agents, and assume that their teams will understand the options on replicating/changing actions in the same way as they do. To understand how the duality instantiates in concrete situations, they must make the effort to connect concepts with socio-material elements present in situations. Some studies have taken this dual role as an issue of connecting strategy with execution (Harreld, O'Reilly III, & Tushman, 2007). We take a different view here because as organizing agents, managers can make the connection directly in the situation. For us then, this is a question of sensemaking. Organizational dualities such as standardization/adaptation can be articulated as mere abstractions and can be very distant from the situated actions of teams. Our study reveals dangers created by this distance that are not being clearly addressed. Researchers who discuss standardization/adaptation options at high levels of abstraction do not usually explore the many levels of interpretation that managers need to connect scenarios with situated actions. If not able to move through levels of abstraction, managers might consider dualities in a contextual vacuum and make decisions too abstract to implement. They risk what Weick (2010) defines as the problem of emptiness in sensemaking, which arises when the concepts that people deploy have no connection with particulars. If managers consider dualities acontextually, they may not be able to make decisions that can be applied by teams in concrete situations.

On the other hand, if managers are not able to conceptualize the conflicting elements that manifest in different concrete situations as instantiations of one conceptual duality, they might not understand how both poles are interrelated. In facing dual demands as discrete problems to solve situation after situation, they risk what Weick (2010) defines as the problem of blindness in sensemaking, which arises when significant cues go unnoticed because there are no concepts to select them. Managers must also become experts in the use of abstractions to find the interrelation among poles. We thus offer contributions on the importance of connecting the discrete manifestations of the duality over long periods of time. To organize collective action, managers necessarily abstract scenarios to build options and disconnect them from concrete situations, but they do not necessarily understand that options are interrelated in such a way that choosing one will raise tensions to choose the other (Smith & Lewis, 2011). We show that to understand these tensions, they might need to cognitively integrate many instantiations of contradictory options in a single interpretation process that considers the views of other actors over time. To do this, they might have to complement their analytical reasonings with real-time experiences with contradictions salient in socio-material elements. They begin by addressing each contradiction as one problem with one solution, and over time recognize the interdependence of options, and extend this understanding to other contradictions.

The rational models used traditionally in international management research to explain how managers select configurations of actions do not include an analysis of the organizing tensions created over time. The rare models that include a consideration of how the managers' understandings influence the decisions on standardization/adaptation (Devinney et al., 2000) can thus be extended with this insight by showing the ongoing backfire that can result from selecting options. Our data show that this is indeed relevant and that managers can learn how to accept it as part of their organizing role. By explicitly alerting

to the tensions that may sustain the duality over time, international management models increase their relevance both to researchers and practitioners. Exploring the tensions is important for instance to explain contradictory results from studies that show similar configurations of actions to be efficient in some situations and inadequate in others, and to explain to managers that they should not only consider the context when selecting the most adequate configuration, but also to expect tensions arising from any option they select. Managers can understand that while they will probably have to select options, they should prepare to accept a raising tension, not as a signal of wrong selection, but as part of the organizational life.

Our third contribution to international management research comes from uncovering the processes that drive managers to different interpretations of their organizing roles towards dualities. Their roles may be understood as solving problems, seeking possibilities, and translating plural understandings about contradictory options. While solving problems and seeking possibilities might be achieved by pure designers, managers that describe the role of translation are very explicit on the need to connect the role of designer with the role of enacter. These managers' narratives point to strategies that can be used to mitigate the risks of blindness and emptiness in sensemaking when addressing dualities, such as training oneself in the deconstruction/reconstruction of meanings by using abstraction but also increasing the presence and/or direct observation of concrete situations; focusing on possibilities instead of solutions; developing the ability to combine self-reflection with dialogue; focusing on the enthusiasm of learning to overcome the confusion and the frustration of sensebreaking; and developing emotional equanimity here illustrated by a sense of tolerance towards plurality. These insights are important to complement the literature on management dualities in what comes to understanding the development of the ability to reframe and transcend dualities (Putnam et al., 2016), but also to complement the literature

on international management in what comes to the development of individual abilities to address dualities, namely the development of global mindset.

Global mindset is understood as an important individual factor that contributes to the way managers address the duality standardization/adaptation (Levy et al., 2007). As organizers of work, managers may use global mindset to differentiate/integrate different options, influence the allocation of resources to one or both poles of the duality, transform the decisions into plans and control mechanisms that lead teams to emphasize one pole over the other, or use balancing acts that might increase the ambiguity that teams face when implementing decisions. At its core, this construct describes the cognitive ability to differentiate and integrate multiple realities, and research has shown it to be related with experiences of complexity (Story et al., 2014), which is in line with our descriptions on the need to deconstruct/reconstruct meanings, thus with the ability to reframe and transcend dualities described in the management dualities literature (Putnam et al., 2016). In this sense, we believe that future research should consider its relationship with the cognitive and emotional processes identified in this study. Additionally, our data point to even more complex sensemaking processes that change the way managers perceive many dualities in a plural environment. The literature on dualities brings important contributions on how managers handle different dualities, although it is also at the beginning of this research (Putnam et al., 2016; Schad et al., 2016). In this sense, we anticipate that the future articulation of studies on global mindset and management dualities will bring fruitful advances for both fields.

Managing complex business models effectively depends on leadership that can make dynamic decisions and engage conflict, and leaders can engage these functions through team-centric or leader-centric structures (Smith, Binns, Tushman, 2010). We found that self-reflection and dialogue with teams can help them in becoming more mindful of the dual face

of their organizing role. Although earlier theories suggest the connection of these practices with global mindset (Story et al., 2010) and the more general ability to articulate dualities (Putnam et al., 2016), empirical studies have scarcely considered them (Schad et al., 2016). We believe that our study might inspire future research on how managers disconnect and reconnect meanings in and between interpretive frames and the concrete elements that manifest in situations, and thus on how these practices are associated with the cognitive abilities that have been studied.

The last important insight is related with the evolution of emotions over time, and their connection to the role of designer/enacter. We found that when standardization/adaptation is articulated only as part of design endeavors, managers seem to use analytical processes to address them, devoid of emotions. This could justify why research does not usually describe emotional tensions in studies of this duality when research is stated at strategic level, but also alerts to the need to deepen it in future studies. Emotions, we found, might play an important role in the development of complex sensemaking processes over time. We confirmed that negative emotions may hinder sensemaking, when the conflicting elements are not expected by managers (Lewis, 2000; Smith & Lewis, 2011), but also that they tend to diminish over time. This happens because managers become more tolerant toward different possibilities, which allows them to incorporate "unexpected" as "expected" in their managerial frames. We also show the role of positive emotions, such as enthusiasm and pride, in creating engagement with the challenge of puzzling dualities over time. These insights suggest that management development processes can be accelerated with learning experiences that trigger possibility, tolerance, enthusiasm, and pride. Future research is needed to clarify how these emotions contribute to the development of global mindset and this research will be important to management dualities' theories, as they can be generalized to other plural and complex contexts in which other types of dualities are salient.

The implications of these insights to management practice in international business contexts is also important. Managers can engage in empty management when they distance themselves from the organizational actions of their teams, thinking and discussing dualities apart from them, especially when teams operate in distant geographies. Management can be empty if managers lack a minimum threshold of concepts to understand what the duality means to different teams in the field. This distance may lead to ambiguous decisions on standardization/adaptation, not easy to translate down the management ladder. A different danger comes when managers get too close to the actions of teams and do not engage in enough abstraction. This management is blind because it does not build the concepts and frames required to recognize the duality. Opportunities to drive synergies out of tensions may be lost and managers may not contribute to organizational memory, as decisions on discrete manifestations of the duality are made on the spot and not considered in careful reflection or discussion. Both risks can be mitigated if managers recognize the interrelation of opposing poles in the duality. Ultimately, managers do not cope with dualities alone, so it is important that they connect to their teams with an open dialogue. In this sense, our study contributes to management practice because it alerts managers to these two risks and at the same time presents strategies that they can use to help them in this regard. Moreover, it helps both manager and team to reflect and discuss dualities in a more fruitful way.

5.6.1. Boundary conditions, limitations, and future research

As with all research, it is important to acknowledge that this study is conditioned by the context and methods used, and thus has limitations. Our insights were developed in the international business context and used a small sample of in depth interviews and limited observations to produce rich data on possible ways to evolve over time. These processes are

to a point specific to this context but have the potential to hold in other contexts in which a plurality of sensemaking frames combine and clash. We thus invite researchers to use them to extend research on learning strategies when managers cope with other types of ongoing contradictions. At the same time, the separation between highly analytical and more emotional ways of understanding what they mean in concrete situations might also be more prone to happen in contexts where manager and team operate from a distance, which is more probably in this context. Nevertheless, the use of technology to support manager and team communication is increasing also in contexts in which they share the same or proximate physical space, so this detachment might be seen in other contexts. The debate on what is specific to international business contexts and what is generalizable to other contexts is an ongoing endeavor (Cheng et al., 2014) and we see strength in both specifying the contextual conditions and understanding the features that point to similarities with other contexts. In this study, we find particularly important the conditions of complexity and plurality that managers perceive in their environment and endorse as drovers for self-development, which can be found in other contexts.

The sample size and data collection procedures bring thus two important limitations to the study. The first is related to the possibility of generalization of conclusions to a larger population, because participants can be outliers in their own context. Producing these kinds of generalizable conclusions was never the intention of this study and we advise readers not to use it in that way. Our intention was to offer conceptual generalizations and we see the participants in the study as illuminative cases that offer important insights on sensemaking processes of managers who developed the ability to work with contradictions, opening new territories for future research.

The second limitation is related to the empirical material. Data are highly dependent on descriptions collected from interviews, and so they reveal the participant's own

perspective. One of the researcher's previous experience of 13 years as a management consultant was used to critically analyze their discursive practices and search for deeper sensemaking processes. We also complemented the interviews with visits to sites and observation of the participant's interaction with their direct team in three cases, although not all sites were visited. This constrains some interpretations and calls for future research to complement the elaboration of the theoretical model. For instance, our data tell us that the structural jumps from one moment to the other were experienced by a minority of managers. The data is not enough, however, to clearly identify antecedents and processes that explain why this happens. We used a small sample of managers to understand how the process may unfold over time, and future research should be developed to understand why some managers go through the four stages while others stop at stage two. The data points to several variables that should be explored (e.g. direct exposure to concrete manifestations of contradictory elements; mindfulness), and to variables that, although previously mentioned in the literature, do not seem to impact the developmental jump (e.g. age, tenure). Future research is needed to confirm these suggestions and explain the reasons for their impacts on development.

5.7. CONCLUSION

Standardization/adaptation is a pervasive organizing duality in international business that ultimately relates to collective actions taken in specific situations, but can be articulated by managers with highly abstracted concepts, not easily connected to those situations. If managers with international roles are not able to deconstruct/reconstruct the cascade of meanings necessary to connect the duality with the actions of teams, they risk an empty or blind management practice. They can mitigate this risk if they are able to simultaneously increase the ability to articulate dualities as abstractions and be mindful of concrete situations

in which conflicting elements become salient in socio-material elements that determine collective action. Constantly pressured to make decisions on conflicting options, managers engage in cognitive and emotional processes that over time change the way they interpret the environment. We connected literatures on international management and management dualities in an inductive study to show that the same conceptual duality is deployed by managers in dynamic ways, and that managers may be both designers and enacters of dualities, moving among levels of abstraction to understand how their opposite poles are interrelated and raise tensions among them.

CHAPTER 6. ORGANIZING NETWORKS OF ROUTINES[10]

6.1. ABSTRACT

Two-sided global networks are innovative organizing models that increasingly transform the way traditional companies organize collective action, posing two important challenges to manage dualities. The first relates to how repetitive actions can be organized to address simultaneous conflicting demands, and the second with the way they transform in already established routine ecosystems. With an inductive study of one business unit's transformation over a period of five years we extend theory on how management dualities are addressed by changing the rhetorical practices and the configuration of routines towards a different coordination that we designate by "decentralized discipline". We also identify three mechanisms that contribute to this change: enhancing dual feedback loops, contextualizing roles, and developing systemic views.

Keywords: Management dualities; Routines; Inductive research; Two-sided networks; Global context

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6.2. INTRODUCTION

Two-sided global networks are innovative organizing models that permeate the international business context and pose significant challenges on how to configure systems of collective action (Alstyne, Parker, & Choudary, 2016; Eisenmann, Parker, & Van Alstyne, 2006; Thomas, Autio, & Gann, 2015). In business contexts dominated by linear flows that connect suppliers with clients in commercial transactions, actions tend to be organized in routines connected in linear chains of input-output relationships and coordinated through programmed performance (Puranam, Raveendran, & Knudsen, 2012). This configuration emphasizes priorities established by top managers and usually does not consider that a single routine might need to cope simultaneously with contradictory demands. The contradiction is usually addressed by selecting organizing options that separate routines with conflicting goals (in space or time), and thus each routine is designed to address one pole of the contradiction (Smith & Lewis, 2011). However, as organizations become widespread ecosystems and lose identifiable places in geographies and supply networks, this organizing strategy may not be a source of value creation. Research on how actions are organized to address contradictory demands is incipient but important to build interdependent perspectives on how organizations address contradictions (Smith, Erez, Jarvenpaa, Lewis, & Tracey, 2017).

An additional change to incumbent firms that wish to operate as two-sided networks is related to the transformation of established configurations of actions, as it involves change in the internal dynamics of routines and/or in the way they connect to each other (Feldman, Pentland, D'Adderio, & Lazaric, 2016). Existent theoretical models on routine transformation are not consensual. As recurrent patterns of actions, routines were firstly studied as stabilizing phenomena and change was described as a difficult process of unfreezing and refreezing behavioral patterns (Nelson & Winter, 1982). These models saw the routine (as a whole) as the level of analysis, and thus undervalued changes originated from inside.

Theories with a process-stand describe routines as generative systems that introduce both stability and change in the organization (Dionysiou & Tsoukas, 2013; Howard-Greenville, 2005; Feldman et al., 2016; Feldman & Pentland, 2003). However, by emphasizing the internal dynamics these models may neglect the way routines (or parts of routines) interact in larger ecosystems with less routinized behavior (Obstfled, 2012). A recent stream of research suggests the emergence of a meso-level behavioral unit (routine cluster or network of routines), in which multiple and complementary routines contribute with partial results to a common task (Kremser, Pentland, & Brunswicker, forthcoming; Kremser & Schreyögg, 2016). This level of research is promising to extend knowledge on how routines can be transformed to address contradictory demands, but is a nascent field, limited by a shortage of empirical studies.

These considerations inspired our overall research question: *"How are routines (re)organized to address management dualities in two-sided global networks?"* and led us to explore the case of a business unit going through an interesting and large-scale transformation process. The IT services industry represents a well-documented case where two-sided networks are the native form of organization for recent players (Thomas et al., 2015). However, they can be a highly disruptive innovation for incumbent companies that operated for long as traditional intermediaries in linear supplier-client chains, and contradictions were not considered when organizing routines. This was the case for the business unit studied in our research (referred to as "ITServ" for confidentiality reasons). Initially a traditional local business unit providing professional services in IT, it redefined its business model in five years, to become a two-sided network with a global operation. We studied ITServ's case from 2012 to 2016, and focused on how the rhetorical practices of managers towards a more interdependent view on contradictory demands changed the configuration of actions in one routine (recruiting) and its network. In this paper the

contradictions refer to the interplay of the strategic duality "standardization/adaptation" and the performative duality "consistency/variability".

Our primary contributions come from two important insights that advance the literature on paradox, tensions, and dualities (Birkinshaw et al., 2016; Fairhurst et al., 2016; Putman et al., 2016; Smith & Lewis, 2011; Smith et al., 2017). First, we show how the rhetorical practices of managers contribute to the salience of dualities at different levels, and identify a recursive relation between these practices and the type of routine ecosystem design used. Second, we uncover three organizing mechanisms that influence routine transformation towards duality management. Additionally, we contribute to the literature on routines by extending knowledge on how they co-evolve with less routinized behaviors in ecosystems, and to the literature interested in two-sided global networks, by identifying dualities that become salient in the rhetorical practices of managers as the network grows.

6.3. THEORETICAL BACKGROUND

Two-sided networks are increasingly found in different industries[11] (Eisenmann et al., 2006; Thomas et al., 2015). They tie together distinct groups of users both on the supply and demand sides of a market, using technology to collect resources and capabilities to enable flexible responses, and usually cross national borders to attract users with divergent interests. The metaphor of the organization as a network that assumes many configurations has been used in international business (Benito, Lunnan, & Tomassen, 2014), but the two-sided character brings specific challenges to a global network, as it focuses value creation on the demand side and supply side (Massa, Tucci, & Afuah, 2017). Although formally incorporated in different ways, these business models rely on network effects and follow the logic of

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[11] Here we use "two-sided networks" to refer to a novel phenomenon that is also studied as "business platforms" and closely relates to the profusion of "digital marketplaces" (Alstyne et al., 2016).

architectural openness, by organizing routines, processes, and resources that combine internal and external capabilities to (re)align with shifting two-sided markets (Thomas et al., 2015). Incumbents operating in traditional industries usually understand this logic as disruptive, because they were organized in linear supply chains in which companies participated with well-defined boundaries (Alstyne et al., 2016). Through time, these chains created dependencies among firms with a commercial supplier-demand character. In two-sided global networks, however, dependencies can assume different formats and are established between firms and other agents that do not respect firm and country boundaries (such as individual nomads, freelancers, informal and virtual teams, or highly formal government and supra-governmental bodies). Managers in incumbent firms that wish to reorganize actions to embrace this new organizational model face important challenges, and current theories are not clear on how to proceed.

Firms operating with thin boundaries between suppliers and clients must be able to develop and sustain the capabilities that allow them to simultaneously attend the conflicting goals of different users (Alstyne et al., 2016). Some goals, while conflicting from the point of view of the users, become complementary in the global network. For instance, a business consultancy firm with for-profit interests and a freelancer software developer with social interests may find their goals conflicting (economic/social), as the first aims to deliver services at high rates and the second aims to experiment new algorithms to release as open source software. The two-sided network generates the possibility to achieve both goals simultaneously, integrating these agents in one temporary project to develop a solution for a client, willing to pay for the development of a user-friendly interface and with no interest in the uses of the software afterwards.

Other conflicting goals, however, may be understood as contradictory demands in the global network. For instance, to engage different users located worldwide, the network might

need to standardize the service (project management) frameworks, to ensure a certain level of

quality in software development regardless of where and by whom the service is provided,

but at the same time adapt the frameworks to engage specific groups of users (e.g. clients that

want disruptive developments but are not concerned with quality because they have internal

teams to ensure it). Another example can be found in the routines used to collect resources

from the global network. For instance, the networked organization might need to standardize

the actions in the recruiting routine to ensure that each recruiting cycle can timely and

efficiently answer a pre-defined recruiting plan, but also to adapt the actions to different

expectations of candidates and fulfill legal and contractual requirements that are different

across national borders. The simultaneous need to standardize and adapt the service

frameworks and the routines becomes a strategic duality in the two-sided global network, a

pair of imperatives that are equally important but in conflict with one another (Birkinshaw et

al., 2016). Managers may connect these imperatives with dual constructs that allow them to

understand the organizational reality with more comprehensive views and introduce them in

their rhetorical practices (Putnam et al., 2016).

Traditional firms handle management dualities in several ways (Birkinshaw at al.,

2016). The most common is to use temporal or geographical separation of structures and

routines to emphasize one pole of the duality over the other (Fairhurst, Smith, Banghart,

Lewis, Putnam, Raisch, & Schad, 2016). These answers might be adequate to some

organizations and in some situations but counterproductive to two-sided networks, because

they must cope with conflicting goals that can become complementary and/or contradictory

in dynamic ways over time (sometimes daily). Strategic decision-making processes, while

proven important to sustain dualities over time with dynamic processes (Smith, 2014) and

balancing acts (Benito et al., 2014), might be too slow to accommodate them in two-sided

networks. On a day-to-day basis, responses to conflicting demands might need to be produced in operations and specifically in routines.

Actions in organizations are primarily organized through routines, which can be seen as repetitive, recognizable patterns of interdependent actions, carried out by multiple actors (Feldman & Pentland, 2003). They are a primary means through which organizations reduce uncertainty in performance (Turner & Rindova, 2012). Two-sided global networks are no exception in the use of this mean, in the sense that they also need to reduce uncertainty and routinizing collective action is important to achieve this goal. Our current understanding of how dualities embed in repetitive patterns of actions is limited by a shortage of empirical studies. We know that work structures can handle recurring changes in a consistent matter (Adler, Goldoftas, & Levine, 1999), that agents in routines can balance changes among priorities (Turner & Rindova, 2012), that organizations might enact contrasting goals during routine transfer (D'Adderio, 2014), and that routines can surface latent conflicts to different degrees (Zbaraki & Bergen, 2010), but we still need further research to understand how routines can regularly address dualities that managers establish as their primary goal.

One important answer can come from observing the way agents perform the actions. Although the goal of routines is to reduce uncertainty with repetitive behavior, agents in routines are not mindless, they use interpretive schemas to support performances (Feldman et al., 2016). Routines entail performative and ostensive patterns that coevolve with individual and organizational interpretive patterns (Rerup & Feldman, 2011). This phenomenon is usually studied as something other than a routine. For instance, the way individual actors use complex structures to handle contradictory demands has been researched at cognitive level (Fairhurst et al., 2016) and the way individuals align their practices with behavior templates that seem incompatible has been researched in the field of institutional complexity (Smets, Jarzabkowski, Burke, & Spee, 2015). Uncovering the individual and institutional mechanisms

used to manage competing logics and their shifting salience to organizational actors is important to understand how they cope with dualities, but this research does not specify how actions are (re)organized in the face of this salience. Moreover, these studies may assume that a certain level of cognitive complexity is required from the agents. This is also, up to a point, what routines aimed to overcome, as the value of repetitive patterns lies in producing (complex) collective outcomes regardless of the levels of cognitive complexity developed by different performers. In this sense, research is needed to explore how cognitive complexity can be enhanced in the context of routine recreation but also on how routine ecosystems can address dualities with mechanisms other than cognitive complexity of individual agents.

A complementary answer can come from observing the way actions connect among them and form different configurations to achieve larger-scale goals (Wilden, Devinney, & Dowling, 2016). These mechanisms might be found in the way actions are designed and connected in the routine (internal dynamics) but also in the way they are entangled in a complex web of interdependencies (network of actions). Instead of describing routines as unitary elements that are always (re)produced together, recent theories see them constituted by parts that may follow different (re)production paths and that co-exist in relational contexts with other (parts of) routines, which are studied as routine clusters or networks (Feldman at al., 2016; Kremser & Scheyögg, 2016; Pentland & Feldman, 2005; Rerup & Feldman, 2011). The literature on how routines interact among them and on how this leads to transformation is scarce but promising. At this meso level of research, the focus in on the interfaces of routines, where coordination and cooperation are the phenomena of interest (Jarzabkowski et al., 2012; Kremer & et al., forthcoming). In traditional organizations, coordination is achieved by means of programming performance by establishing goals and controlling achievements (outputs) of single routines (Puranam et al., 2012). This mechanism does not usually consider dual demands, as it prioritizes one set of goals and may over time become a self-

reinforcement mechanism that creates path dependency by reducing the set of choices and the feedback loops that agents use to select behavior in individual performances (Puranam et al., 2012). This can lead routines to lock-in performances and bring rigidity to the organization, which is counterproductive to address dualities. Research is thus necessary to understand how coordination can be achieved with programmed performance but also with mechanisms that do not close the set of possibilities on which future actions draw.

Two-sided networks are not necessarily less formalized in their processes but have, by definition, the need to match the interests of different groups of users, which introduces a significant difference in the way they interpret the business context. The challenge is to stabilize the ecosystem of routines in such a way that it can accommodate coordination through programmed performance mechanisms and also match conflicting requirements. In this sense, while actions still rely on inputs to produce outputs, both can change very quickly, and the network will still need to ensure that the ecosystem performs consistently with a sense of continuity over time. On the other hand, the changes from internal dynamics might not be fast enough to accommodate the different needs of the users connected in the network. This need to work with changing inputs to produce changing outputs, and do it consistently, represents an inversion of traditional thinking on routines, because managers aimed at guiding the actors to operate according to stabilized procedures that brought predictable outputs from predictable inputs (Turner & Rindova, 2012). Performances ought to change only when the context changed, which was usually not expected in short-term periods. Under this perspective, still followed by most organizations, agents assume roles with closed scopes and detailed procedures and are socialized to repeat actions with increased expertise and not to cope with dual demands. The inversion comes from the way the context is perceived, because managers in two-sided networks perceive that the plurality of users in the network will build a continuously changing context for routine enactment. Routine ecosystems should

thus be able to aim at different outcomes with similar actions or be capable of constantly self-reorganizing while still reducing behavioral uncertainty.

Incumbent companies that want to operate with this model must find ways of transforming their internal ecosystems of routines. Routine transformation can be triggered and enabled by changes in the inputs and/or failures in producing the expected outputs (Rerup & Feldman, 2011). These upstream and/or downstream changes can lead actors in the routine to reorganize actions to accommodate the use of a different mix of resources or to produce a different set of outputs. Transformation can be triggered by the routine's internal dynamics that through the accumulation of performative variations, produce significant change over time (Feldman et al., 2016). These studies situate research at the level of actions in routines and their connections with inputs and outputs, but usually do not observe the overall design of the routine ecosystem. Also, by emphasizing the role of repetition, they might neglect the role of less repetitive behavior in the ecosystem (Obstfeld, 2012). This level of research is of extreme importance to the context of two-sided networks and requires more comprehensive understandings of interrelations of routines (Kremser et al., forthcoming).

6.4. METHODOLOGY

The purpose of this longitudinal, inductive study of one business unit's transformation (ITServ) over a period of five years (2012-2016) is to extend theory on how management dualities are addressed by (re)organizing actions in routine ecosystems. For analysis purposes, we set the beginning of the transformation period in 2012, as this was the year when top managers started to hold formal discussions on identity and strategy, in face of the changes in context brought by internationalization. We set the end of the analysis in 2016, when formal documents clearly stated a new strategy, business model, and configuration in

the routine ecosystem observed. ITServ is legally incorporated in a local franchisee of a leading global consulting company. During this period, it transformed from a local unit operating with 50 employees to a two-sided global network operating with 600 employees and a vast grid of external partners. This unit's performance during the period is considered a success case in the organization. In the context of the local franchisee, its transformation endeavors became the benchmark for other units, and in the context of the global consulting company, it achieved the status of center of excellence.

6.4.1. Data collection

Data collection combined 35 semi-structured interviews, 112 hours of on-field observations during a period of 18 months, and historical documents (549 pages), as summarized in Table 7. We aimed at finding evidence of changes in the rhetorical practices of organizational actors and in the routines, taken in their own context, and understand how they influenced each other over time. The process followed two main stages. In the first stage, entailing observations, interviews, and documental analysis in the second semester of 2014, we collected stories of how the business growth (through internationalization) changed the rhetorical practices of managers and the routine ecosystem. At this point, growth by internationalization was the main driver of the business unit and although routines were changing to accommodate it, the idea of operating as a two-sided network (and the dualities associated with it) was not present in the data. It became present in the rhetorical practices of managers during 2015 and was the dominant metaphor used to align operations in 2016. In this sense, our research was only directed to this organizing phenomenon as time went by, which allowed us to document the changes in the process as it unfolded.

Table 7: Data collection overview and contribution to analysis (Study 3)

Collection method	Identification on paper	Main contribution to analysis
On-field observations: • Management meetings (16 hours) • Visits to offices (52 hours) • Recruiting routine and People Connect (44 hours)	[MM1 to MM3] [V1 to V20] [RR1 to RR12]	Evidence of change in the routines' ecosystem. Confirmation of rhetorical practices' dissemination.
Interviews: • ITServ's Leader (6 interviews) • ITServ's top management team (4 interviews) • ITServ's employees (9 interviews) • Other business units' managers (4 interviews) • Corporate HR leader (1 interview) • Recruiting Manager ITServ (2 interviews) • Network Enrolment Manager (1 interview) • Recruiting Manager Corporate (1 interview) • External informants: HR managers and consultants (6 interviews)	[ITSL1 to ITSL6] [TMT1 to TMT4] [ITSE1 to ITSE9] [BUM1 to BUM4] [HRL1] [RM1 to RM2] [NE1] [RMC1] [EI]	Evidence of change in the routines' ecosystem. Evidence of change in the rhetorical practices used by individuals, specifically the awareness of agents to the need to address conflicting demands (strategic and routine levels). Understanding of the interplay of dualities, particularly the translation of a strategic duality to a performative duality.
Document analysis: • Structure and formal procedures [39 pages] • Handbooks 2014, 2015, 2016 [117 pages] • Internal communications [13 pages] • Agendas and decision-making support [116 pages] • Social media and other external sources [264 pages]	[SFP] [Handbook] [IC] [ADM] [SM]	Evidence of change in the business model and routines' ecosystem. Evidence of change in the topics discussed and decided at strategic level, and their dissemination through rhetorical practices.

The changes in the recruiting routine were highly salient in the data from the beginning of our research, which led us to select it as the target for the next stage of data collection (2015-2016). This decision also considered that "recruiting" is a well-documented routine in previous studies of routine creation and transformation that show a high level of cross-industry standardization of ostensive patterns (Feldman, 2000; Rerup & Feldman, 2011). The data collection with industry representatives and consultants showed that the ostensive pattern of this routine is highly standardized across companies in ITSer's environment and has a very strong overall fit to the one described in these earlier studies, which reduced the need for long descriptions of the routine in this paper.

As our work became progressively focused on the interrelations among routines (please see next section explaining the analysis process), so did our data collection. While we started by observing actions in the recruiting routine (2015), we zoomed out from the inner dynamics of the routine, to zoom in the actions in the interfaces of this routine with others.

This analytical device follows Nicolini's (2009) recommendations and allowed us to change and combine perspectives. The network of routines was considered the unit of analysis when we moved to make sense of how routines (re)organized in clusters (Kremer et al., forthcoming). Specific actions were taken as the unit of analysis when we wanted to make sense of the internal dynamics emerging in these connections (Parmigiani & Howard-Grenville, 2011; Pentland & Feldman, 2005). As the analysis continued, we progressively considered the ostensive patterns present in the ecosystem of routines and how they connected, as this abstraction was necessary to show how coordination was achieved. In the third stage of data collection, conducted during 2015 and the first semester of 2016, we thus focused data collection on the ostensive pattern of the recruiting routine and its interrelations with others, on how they changed over time, and how changes in this ostensive pattern were related with the changes in the rhetorical practices of managers and other routine agents.

Evidence of change in rhetorical practices. During the five-year period ended in 2016, ITServ's top management team entailed a significant reflection about identity, structure, and processes, which increased the traceability of changes in the rhetorical practices at strategic level. Their reflection produced formal statements of strategic principles and values, documented in a yearly handbook delivered to all employees (beginning in 2014), agendas, and videos used in meetings and internal newsletters. When studying routines from a historical perspective, Mutch (2016) showed that formal statements facilitate the elucidation of the logics that provide shape and meaning to routines over significant periods of time. This insight led us to collect the handbooks as the main source of information about the changes in rhetorical practices. As for the pre-handbook period (2012-2013) we used two videos. These textual data were contextualized in a performative process, as we accompanied the production of the handbooks and verified (with presence in meetings and informal conversations with employees, and copyediting/proofreading work) that they translated a

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deep negotiation of meanings and priorities among top managers, and that their dissemination produced a significant alignment of the rhetorical practices used by operational managers and some task performers (verified through informal conversations). As for the videos, we used the top management team interpretations to establish their validity as historical representations of the practices that were dominant in the past.

Evidence of change in the routines' ecosystem. Although changes were observed in other routines, we selected "recruiting" to illustrate how a routine evolved in its ecosystem over time, because its relevance and transformation were highly salient in the data, and research revealed it to be a well-documented routine with strong similarities across companies and industries (Feldman, 2000; Rerup & Feldman, 2011). This earlier research allowed us to create a rich imagery of possible patterns of the routine to find similarities and differences with ITServ's case. To understand changes in this routine we used documents with procedural descriptions, internal and external communication documents, and direct observations of actions conducted by agents in ITServ's offices and in their contact with recruiting sources (three universities). We also used external informants to consolidate our interpretive work (three HR managers and three HR consultants). They confirmed the similarity in the ostensive patterns of this routine across the professional services' industry, and informed us of changes that might be connected to overall trends in human resources practices. In this way we could build stronger interpretations, as we isolated the changes in the routine ecosystem that were closely related to the need to transform to address management dualities. The first author's work experience of 13 years as a consultant in a very similar environment was also used to establish the global and local context for "recruiting" in the consulting industry, and thus to establish a framework for singling out the evolution patterns unique to this case.

We recognize that the separation between changes related to overall trends and changes related to the management of dualities is difficult and was used as an analytical device in our interpretive work. It helped us navigate through the mess of qualitative data (Langley, 1989) and carve out the narrative details that did not contribute to our understanding of how actions are (re)organized, thus progressively focusing the data collection and analysis in our research question (Sinkovics & Alfoldi, 2012). The evidences of changes were thus found by comparing historical documents that described the routine, retrospective data in the interviews, and field notes from the direct observations during the period of analysis.
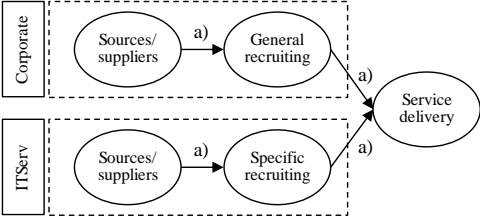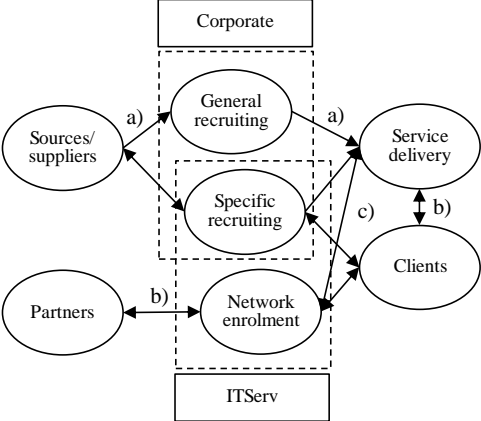
6.4.2. Analysis

We endeavored to analyze actions and connections of actions and progressively established the level of analysis at the meso level in which routines couple in networks (Kremser & Scheryögg, 2016). As we wish to discuss the evolving coupling of highly routinized behavior with less routinized behavior, and while the literature on the meso level of research matures through the use of different words (e.g. routine cluster, bundles, network of routines), we use the concept of ecosystem to refer to this level of analysis. In our view this concept translates the idea of co-evolving interrelations among routines and other elements that might not comply with the definition of routines. Data analysis involved formalized steps of (i) organizing narrative moments, (ii) coding (data reduction), and (iii) modelling and interpretation. To facilitate transparency in the dialogue between researcher and textual data and thus improve reliability, validity, and confirmability of the inductive process, coding procedures were supported by CAQDAS (N'Vivo software). These analytical strategies helped us cross-tabulate three narrative moments (Langley, 2007) with a data

structure consisting of first-order concepts, second-order constructs, and aggregate themes (Gioia, Corley, & Hamilton, 2013).

***Step 1 – Organizing narrative moments*.** Taking the handbooks and videos as our main source of information, we identified three metaphors that produced different rhetorical practices in the business unit during the period. We used them to separate three narrative moments and analyzed how the ostensive pattern of several routines changed from one to the next. During 2015-2016 we directly observed actions in the recruiting routine and particularly the interfaces in which this routine interacted with others in a larger ecosystem. For analysis and writing purposes, we selected the most relevant in the data and prepared a simplified version of the routine ecosystem. We elaborated rich narratives describing the ostensive patterns of routines and how they connected to each other in each moment. As the handbooks use a similar structure, we were able to compare the descriptions used by managers from year to year (2014-2016), and used the same structure to identify the underlying metaphor and rhetorical practices in the videos (2012-2013). We summarize our analysis in Table 8 and provide explanations below.

Table 8: Summary of narrative moments with dominant dualities and transformation of "recruiting ecosystem" (simplified ecosystem)

Dominant metaphor	Moment 1 (2012-2013) "a local business internationalizing"	Moment 2 (2014-2015) "an extended enterprise"	Moment 3 (2015-2016) "a connecting business platform"
Dominant dualities (strategic level)	(1) Standardization/adaptation	(1) Standardization/adaptation (*) High growth/minimal structure	(1) Standardization/adaptation (*) High growth/minimal structure (*) Reliability/innovation
Routine ecosystem design (simplification)	*Corporate Routine*	*Corporate routine and Unit level routine ("Sourcing Engine")*	*Unit's routine ecosystem labeled "People Connect"*
Dominant dualities (routine level)	Not visible to actors	Not visible to actors	(2) Consistent performance/variable outputs

Legend: a) Input-output relation (transactional); b) Formal coordination through programmed performance mechanisms; c) Coordination through decentralized discipline; (*) While also identified in the study these dualities are not developed in this paper

From 2012-2013 the unit was seen as "a local business unit going international": "We will operate with geographically dispersed hubs (…) to create business growth with recursive service, by following our clients in their global challenges." [IC, 2014]. From 2014-2015 as "an extended enterprise": "We operate as an extended enterprise that creates sustainable business growth through innovative and brilliant service, by helping our clients, irrespective of their geographies, to navigate complex transformation projects. 'Sourcing engine' provides resources in alignment with the demand." [Handbook, 2014]. From 2015-2016 as "a connecting business platform": "We operate as a network that connects demand and supply to create value with innovative and brilliant service, by helping our clients, irrespective of their geographies, to navigate complex transformation projects. 'People connect' is responsible to guarantee that we can deliver our solutions according to our clients' expectations." [Handbook, 2015]. From this moment on, the transactional logics that permeated the rhetorical practices of actors had been substituted by a dual discourse, as will be explained later in the findings section.

In the first moment, recruiting was organized as a corporate routine existent outside ITServ's hierarchical boundaries. ITServ delivered yearly requests on the number of employees needed and the corporate services provided these employees to the unit. This unit was but one of several users of the corporate routine's outputs, as the firm had six business units that also provided professional services (with different specializations). The ostensive pattern of this corporate routine entails the tasks of: compiling _requests_ that each business unit sends in (bi)annually; contacting different _sources_ of candidates; communicating with candidates; applying different tools to _select_ the candidates; presenting a _proposal_ to the selected candidates with one type of work agreement; and _allocating_ the candidates to different business units in the company [SFP, HRL1, RMC1, RR1/2].

Tasks were directly observed during 2015 and, according to the historical data and retrospective interviews, their pattern did not change significantly during the period of analysis. However, in the second moment, the routine had been duplicated inside ITServ, and was from then on considered part of its internal operations [Handbook, 2014, 2015]. Both routines (at corporate and business unit level) sourced and allocated employees to ITServ's operations (service delivery). The corporate routine filled general recruiting purposes, allocating employees to all business units twice a year. ITServ's routine, designated in the unit by "Sourcing Engine" [IC], filled the remaining gaps in terms of the quantity and specific competencies of new employees [RR1 to RR4].

In the third moment, the duplication still exists but each routine (corporate and unit's level) has different targets (sources of recruiting). In addition, new routines were added at ITServ's level, allowing the unit to extend its portfolio of employees with quasi-employees (partners). Interfaces with coordination mechanisms among the three routines were added. Part of ITServ's recruitment routine decoupled from the corporate routine and integrated at Unit's level with other human resources practices, building an integrated system designated by "People Connect" [Handbooks, IC]. This system is not only responsible for the relations with ITServ's formal employees, but also with outsourced workers and freelancers gathered from a network of external partners. This shift in the routine ecosystem thus represents a different orchestration, moving its actions from corporate to the unit's level, and from inside to outside the organizational boundaries. Using the theory on two-sided networks, one can say that some tasks in the routine were orchestrated towards an external network that complemented the activities of once-internal functions (Alstyne et al., 2016).

Step 2 – Coding. Following the insight taken from Step 1 on the importance of interrelations of routines, and inspired by the analytical techniques of zoom in/out (Nicolini, 2009) and progressive focusing (Sinkovics & Alfoldi, 2012), we used coding procedures to

zoom out of *actions in routines* and zoom in the *actions in the interfaces between routines* and understand their transformation from narrative moments 1 to 3. Although recruiting has other interfaces, we simplified the analysis by focusing on the ones that provided the most important inputs (contact with external sources of candidates) or relied on the outputs (contact with internal areas that needed the employees for "service delivery") of the routine, to understand the patterns created/ transformed during the period and the mechanisms that influenced this transformation. Our analysis endeavored to understand how the management dualities embedded in the rhetorical practices of agents in each moment (both at strategic and routine levels) co-evolved with the routine ecosystem and show it with a simplified diagram.

The coding procedures were supported by CAQDAS (N'Vivo software) to increase trustworthiness and transparency of the process (Sinkovics & Alfoldi, 2012). Interviews and videos were transcribed verbatim, verbal information in historical documents was transcribed to Word files, and handwritten field notes were summarized in computer files and imported to the system. Our analysis relied on a process of abductive theorizing and progressive work towards higher levels of abstraction (Gioia et al., 2013; Mantere & Ketokivi, 2013). The literature on management dualities was progressively incorporated in our interpretations and was complemented with the literature on routines, networks of routines, and organizing. We took turns with a different scope when coding the narratives. The first round of coding concerned the agents in routines and specifically the rhetorical practices used, the second concerned the tasks composing the recruiting routine and related ecosystem, and the third looked for sentences that implied changes over time (indications of before/after, and verbs that indicated changes in patterns). We summarize our data structure in Figure 4.

Figure 4: Data structure overview (Study 3)
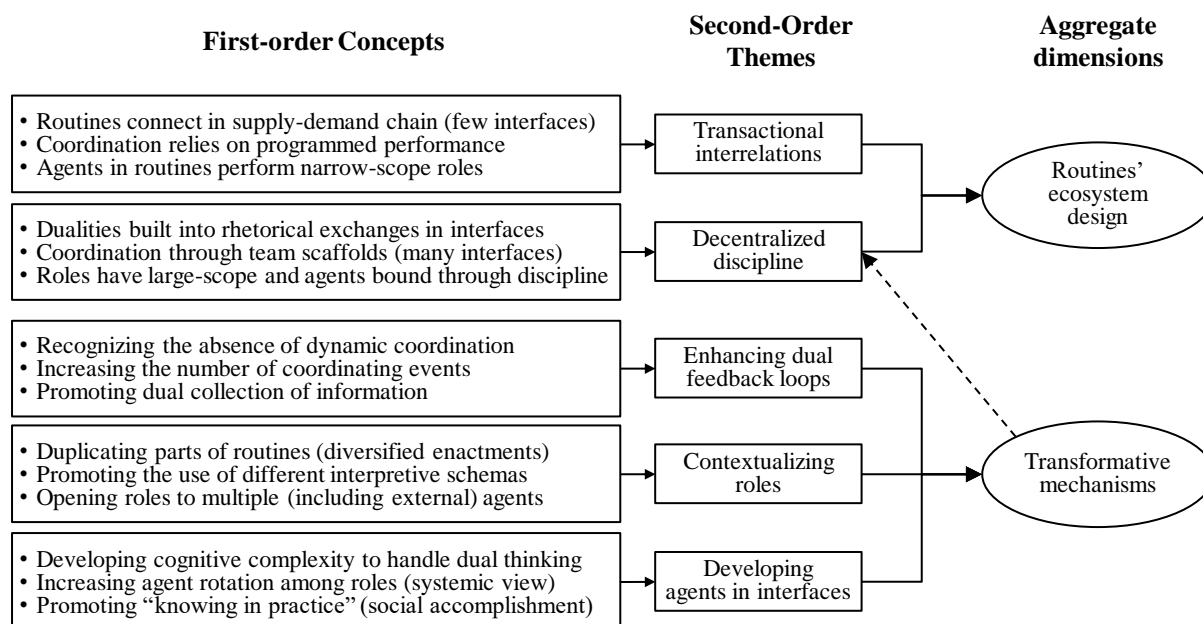
Step 3 – Interpretation and modelling. Combining the narrative analysis with the first round of coding, we endeavored to understand the rhetorical practices used over time. We gained insights on the themes that were salient in these patterns, and understood them as conflicting demands that seemed to imply sometimes complementary and others contradictory relations. We used the literature on management dualities to make sense of these insights. The data reveals up to three dominant dualities interplaying in the discourse of managers with strategic roles, translated by managers with operational roles in the routine ecosystem to one performative duality. We used the ideas of "salience of dualities" (Fairhurst et al., 2016) and "dynamic relations" (Smith, 2014) to explain how dualities could become present in dynamic ways to the actors designing the routine (strategic level) and the managers and other actors organizing and performing the tasks in the routine (routine level). This led us to identify a difference in the level in which dualities became salient in rhetorical practices, as well as a tendency to move from a moment in which dualities were salient only at strategic level (traditional supply-demand organizing), to a moment in which dualities were salient at both levels (two-sided global network).

In the second round of coding we endeavored to understand how tasks were organized over time. This round brought light to the simultaneous emphasis that ITServ's informants gave to "agility" and "discipline", and how this changed the way they coordinate tasks. Using retrospective data and confronting their descriptions with the descriptions of the corporate routine and of the routine in similar organizations, we identified these features as the novelty in the ecosystem. We distinguished a novel system based on agility and discipline from the traditional system in which tasks connect in input-output relationships (transactional). The literature on task organization was combined at this stage with the literature on management dualities. In the final round of coding we endeavored to understand how the change from the traditional transactional interrelations to the new system was achieved in the case of ITServ. This analysis led us to identify three mechanisms that enabled routine transformation in the ecosystem (adding to the mechanism of rhetorical practices already identified). Literatures on routine coordination and cognitive complexity of agents were combined to enhance interpretation at this stage of analysis.

6.5. FINDINGS

Our case study suggests that routine ecosystems can transform towards duality management and uncovers a recursive relation between the level in which dualities become explicit in the rhetorical practices of managers and the type of design used to connect routines in networks. It also suggests three mechanisms that can be used by traditional companies to explore this relation with the aim of adapting their routines to the disruptive organizing logic of a two-sided global network. We summarize these findings in Figure 5 and explain them in the next sections.

Figure 5: (Re)organizing routines to address dualities
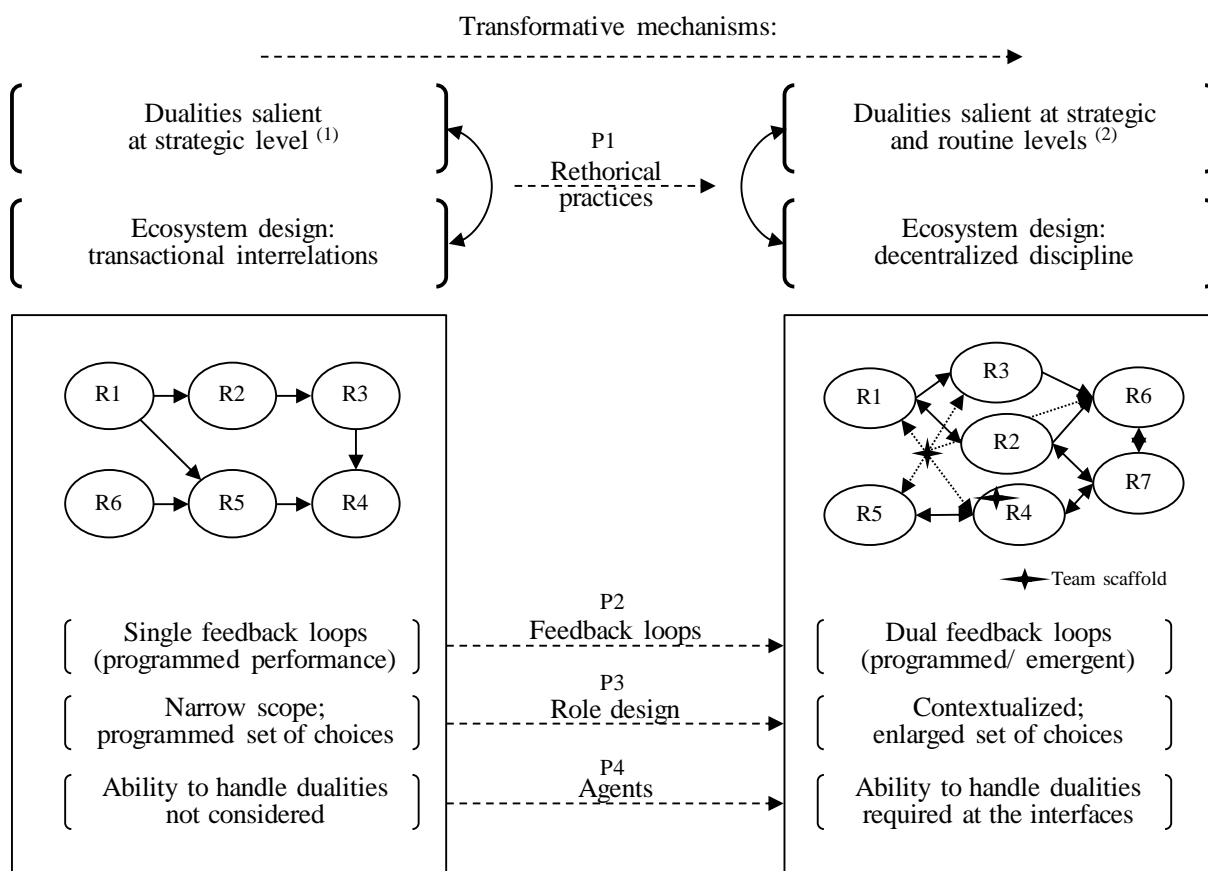
Legend: (1) Corresponds to Moments 1 and 2 in our case study, which represent a traditional business model
(2) Corresponds to Moment 3 in our case study, which represent a two-sided global network

6.5.1. How the design of routine ecosystems is related with management dualities

Over a period of five years, ITServ's business model organized around three metaphors that progressively embedded management dualities in the rhetorical practices of managers. In the beginning of the period (Moment 1 identified in Table 8), the metaphor of expanding to new geographies drove the top managers' attention to "standardization/adaptation" as a duality (Bartlett & Ghoshal, 2002; Benito et al., 2014). They were concerned on how to balance the need to increase global efficiency (maximizing standardized procedures across countries) and the need to improve service quality with local presence and knowledge (which requires the adaptation of actions to local expectations, thus

minimizing standard procedures) [ITSL1]. The duality was discussed by top managers and informed the way they kept on using the corporate routine (increase efficiency) but changed the requests to include the second pole of the duality: "we need a set of employees with diverse characteristics and experiences to attend our international markets"[TMT4]. The corporate routine was not able to respond to these requests. Actions in this routine were organized as linear transactions of input/output and coordination was driven by programmed performance (Puranam et al., 2012). Orders from several business units (among which ITServ) were integrated in a recruiting plan, and pre-established tasks were executed to produce outputs (new employees with standardized profiles) twice a year. This routine failed to answer ITServ's requests for two reasons: "the half-year period necessary to hire new employees (routine's response time) was too slow to meet the growth rates of the unit" [ITSL3], and the standardized profiles of employees (routine's outputs) did not allow ITServ to answer the second pole of the duality, as they "couldn't adapt service across geographies" [ITSE2].

The failure to timely produce expected outputs is a recognized trigger to routine transformation (Rerup & Feldman, 2011) but in this case the routine did not change because it was embedded in a larger ecosystem connected at corporate level (Puranam et al., 2012). To reduce the response time and increase the ability to recruit differentiated profiles, ITServ replicated the routine with a similar ostensive pattern inside the unit (Moment 2 identified in Table 8). Co-existent at this moment, both routines were structured with a transactional logic, in which tasks connect in supply-demand chains and co-evolve towards performance indicators determined centrally. This kind of task interrelation assumes that only top managers cope with dualities, by selecting which pole is prioritized and deployed into programmed performance mechanisms.

At the end of the research period (Moment 3 identified in Table 8), ITServ operated as a two-sided network and the metaphor embedded in rhetorical practices went from "expanding/extending" to "connecting" [Handbooks; MM1 to MM3]. This turned out to be an important change because while expanding and extending were easy to explain with no use of dual discourse, connecting was not. The duality standardization/adaptation was still very salient in discussions, but the rhetorical practices of managers embedded additional dualities. By their own words, "connecting requires the understanding of divergent and changing interests of different users in the network" [ITSL4]. ITServ's recruiting routine was challenged with the need to operate with an open talent logic, in which "the resources' profiles are not only defined here (the unit) but also by clients directly" [NE1], and in which "resources can be employees but also external partners" [RM2]. This operating model introduced a need for greater variability in the outputs of the routine (employees), a need for coordination with other routines that complement the capture of resources to the network (network enrolment of partners), and an integrated system to manage the internal and external resources in such a way that all routines can timely accommodate future needs. The integrated ecosystem in which routines (and non-routinized behaviors) coordinate inputs and outputs was labeled in the unit by "People Connect" [Handbook, RM1] (we use the same label in the paper).

To explain the changes in the operating model, managers introduced a dual way of talking, using "both/and" and "balancing" instead of "either/or" and "follow these instructions" to lead their teams [V1 to V20]. The literature on management dualities (Birkinshaw et al., 2016; Birkinshaw, & Gupta, 2013; Putnam et al., 2016; Farjoun, 2010) provides important insights to understand how the introduction of dualities in rhetorical practices is important to routine enactment. We found two interrelated concepts of high interest: the salience of dualities and the dynamic nature of duality interplay. Salience/non-

salience explains how dualities may appear (become salient) and disappear from the actors' interpretations, in such a way that even if always present to a different observer, some actors in some contexts will address dual demands, but not all and not always (Smith & Lewis, 2011). This explains why the introduction of a dual way of talking in the rhetorical practices of managers triggered a different way of acting, as agents changed the interpretations of what was expected of the actions (from a goal/number in a file to a balancing act).

The dynamic nature of duality interplay explains that this is a dynamic process, in such a way that over time the same actor may understand and address a duality in different ways, and that the interplay of actors will render some dualities salient at some levels and not others (Smith, 2014)[12]. This helps explaining how actions in routines can sometimes follow a goal and are acts of highly repeated behavior, and sometimes are seen as a dual demand and cause breakdown in the regular flow of actions (Smith & Lewis, 2011). Both concepts are useful to explain how a change in the level in which dualities became salient to agents contributed to a change in the way routines connected in the ecosystem.

At the strategic level, the top managers' discussions in two-sided networks reveal the interplay of several dualities (Birkinshaw et al., 2016). In our case study, they progressively reveal the interplay of three dominant dualities: standardizing routines to increase efficiency in the global network while adapting interactions to different groups of users across countries (standardization/adaptation); attracting clients and suppliers to the network to achieve growth while keeping structure to a minimum (high growth/minimal structure); and increasing reliability in the network while innovating to match the co-evolving interests of users (reliability/innovation). To simplify the analysis and writing process of this paper we focused on the first. As shown in the analysis summarized in Table 8, in Moments 1 and 2 this dual way of interpreting the business was only present in the strategic discussions. Along time,

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[12] This issue is also addressed in the second study presented in this dissertation in Chapter 5.

regular internal meetings and the introduction of the Handbook were key to embed them in the rhetorical practices used by managers responsible for routines (which happened during Moment 2 and was consolidated in Moment 3).

ITServ's Recruiting Manager refers in her discourse to the "need to balance… we need to be in perfect alignment with the other dimensions of 'People Connect' and this is why we share files in the computer and meet weekly… at the same time we need to hire diverse employees very quickly, and this is why we do not have standard procedures, so that we can change very fast". We interpreted this as a performance duality regarding "consistency/variability" that became salient in her rhetorical practices and influenced the interpretations used to understand and coordinate tasks in the routine. In this sense, she translated the strategic duality standardization/adaptation into the need to continuously balance consistency (timely reproduction of tasks regardless of who is the task performer, to ensure a strict alignment with other routines clustered in People Connect and variability (deliver differentiated profiles over irregular periods of time). There was no specific investment made to spread this idea among routine actors, but as new employees were socialized to perform the tasks, not only the manager but also some task performers became highly aware of the need to pursue these conflicting goals simultaneously, i.e., to manage a duality with a balancing act. With this data we confirm earlier theory that identifies the interplay of manager and team as a driver of salience to dualities (Smith & Lewis, 2011).

The awareness of managers and other actors to the duality "consistency/ variability" triggered a significant change in the internal dynamics and connection of the routine in its ecosystem. Agents needed information to feed both poles of the duality as "we use the same files (control of quantitative goals) that we used before, but constantly check them because each project might require a different combination of resources" [ITS7]. They still controlled their actions through programmed performance (consistency), but also openly discussed the

evolving interests of users in network to find possible matches among clients, partners, suppliers, employees, managers, and different units of the company, located in different countries (variability). We interpret this as the emergence of dual feedback loops to feed programmed and emergent needs for information and meaning negotiation. The duality becomes salient through time, because both poles are regularly activated in discussions at several points in the ecosystem. The relation between the salience of dualities and the way actions connect in the ecosystem is recursive.

The network's demand for new employees was now irregularly channeled through several interfaces in the ecosystem and not by requests presented by top managers to the routine. Recruiting agents could no longer wait for requests to initiate the tasks of sourcing and communicating with candidates, as "the need for different profiles might change at any time" [RM2], and they could no longer stand alone when performing the tasks of selecting and allocating the candidates to projects, because "the requests might be better fulfilled with external partners and not recruited employees, and when we don't have a matching partner in our network we ask our partners to open their network to us and recommend one" [NE1]. This realization made the supply-demand logic that connected actors in and between routines obsolete and alerted them to the absence of coordination mechanisms. Informal channels that enhance communication and cooperation (phone calls, email, coffee encounters) became important, but the primary channel used was the creation of small coordinating teams that included (rotating) agents from the different routines in the ecosystem and had autonomy to quickly change the programmed performance and create shared perspectives about the requirements of the different users in the network.

The interactions of these teams were materialized in weekly meetings and regular exchange of controlling files, although the hierarchical report of each agent to different routines and units was maintained. Although all actors knew each other, they only worked

together during short meetings complemented with simple phone calls, email, or chat. This minimal team structures that explicitly bound a small group of roles and give them group-level ownership over their shared work are studied as team scaffolds (Valentine & Edmondson, 2015). Team scaffolds, though using some routinized behavior (as all human action), do not fit the definition of a repetitive recognizable pattern of actions (Feldman & Pentland, 2003). Yet, the evaluation of how the system could produce "consistent behavior" and "diverse profiles" was now dependent on their actions ("I can adapt my tasks, as long as I keep the alignment with A. (responsible for partner engagement) and E. (responsible for project scheduling), which we ensure in our weekly meeting" [RR3]). To understand how actions were reorganized we thus have to include routinized and non-routinized elements of behavior in the ecosystem (Obstfeld, 2012). Team scaffolds are used to evaluate programmed performance indicators but also discuss the shifting needs in the two-sided network, which may not translate to performance indicators but are important to understand how variability can be brought to the routine's outputs.

In the corporate routine, interfaces were positioned at the beginning and end of sequenced tasks, but in ITServ's routine in Moment 3 they existed along the sequence of tasks. Teams scaffolded dual feedback loops that while feeding programmed controlling mechanisms, also opened different requests. The emergent loop regarding discussions on matching the evolving interests of multiple users in the two-sided network (variability), does not necessarily establish a pattern of information in subsequent actions (it may stop in the matching cycle that originated it) [RR4; RR6]. In this sense, teams (at least weekly) integrate the information to make decisions on discrete problems, but do not close the flow of contradictory interests that converge in these moments into complementarities or conflicts in the network. Sometimes these contradictions are seen as dilemmas and they opt by either/or solutions ("We had to decide. Either we kept on doing those boring recruitment safaris in the

universities, as our competitors still do, or we changed everything." [BUM3]), and sometimes as balancing opportunities that they address with both/and solutions ("After experimenting for a while, we started using both. The new employer brand is combined with new formats of communication, and the way we talked with candidates changed radically, but we are still the same and the interviews are very similar, although conducted by very different people" [BUM3]). Dualities are kept going through time in dynamic ways (Smith & Lewis, 2011; Smith, 2014).

By regularly participating in the discussions, agents developed a shared believe that all of them should act differently but competently, diligently, and towards a common goal [Handbook; RR; V1 to V20]. We interpret that this implies a qualitative change to the ecosystem design that might be difficult to understand in terms of what is suggested as strength or direction of the interrelations of actions/routines (Kremser et al., forthcoming). This qualitative change is better seen as an emergent property of the system. It implies that interrelations among routines can be constantly rearranged (the coordination is decentralized) as long as the ecosystem complies with the requests emerging at the ecosystem's level (coordination is disciplined). In Table 9 we provide evidence for the qualitative difference we observe in the ecosystem design over time.

Table 9. Data supporting the identification of different types of interactions in the routine ecosystem (illustrative examples)

Interrelations of routines in ecosystems	• ***Transactional interrelations***: "This is input and output. In a stabilized environment, you give that person an input and she generates an output (…) when I started to work in this area, we called this system 'sourcing engine' (…) 'engine' like a 'manufacturing plant', such an awful idea (…) machine-like, when in fact we are talking about people! (…) and 'sourcing' is but a very small part of what we do" [RM1] "The performance appraisal system in this company relies on quantitative indicators reviewed yearly, people abide to them and stop seeing other possibilities" [ITSL1; V3; HRL1; TMT3] "Most employees in the corporate routine cannot see beyond their tasks, do not understand what is going on, what is going to happen in the future, they cannot create a future" [ITSL3] "They (corporate routine) do not want to change. They want easy and standardized solutions and ask 'how does this fit into my box?' and 'how does my box connect to other boxes?' (…) organized by silos" [RM1; RR1 to RR3] • ***Decentralized discipline***: "When we started using consultants to perform tasks in People Connect, the other areas in the firm criticized, because they believed these were administrative tasks, but not all are (…) people interacting to decide who does the hiring, where to get the partners, how that will coordinate with the schedule, negotiate conflicts (…) not administrative! They rely on each other to get a clear picture of the entire system and decide on how to proceed (…) trust is key" [ITSL5] "The organizing model itself is not the key, people are. Boxes (hierarchical) do not act, people do. This is why they have to develop a kind of communication that does not require words, that is implicit, that is supported by trust" [ITSL1] "We decide on how to proceed, but a simple call can change that (…) we have this common mindset, shared understandings, a common purpose, trust!" [RM2] "Many tasks are still repetitive patterns, such as filling excel files, preparing documents for interviews, preparing offers and work agreements for candidates (…) but in these teams (agile teams) there are no frameworks, they seem friends getting together to understand what happened, share experiences, and decide on what to do next (…) they still control the KPIs but the meeting is more about the issues that are not on KPIs (eg. what Client A. requires; how Partner B. can answer better than ITServ; decide on hiring or get from partner)" [RR4 and 5]

We use the term "decentralized discipline" to characterize the routine ecosystem in Moment 3. The word "discipline" was explicit in the data and the word "decentralized" is added to emphasize the idea that the discipline is embedded in the ecosystem but does not depend only on central decisions on performance. Disciplined (not repetitive) behavior is necessary in the interfaces to achieve consistency in the ecosystem, but individual performances are adapted by using different agents and coordinating their actions with more flexible mechanisms. In a sense, as Farjoun (2016) suggests, consistency becomes an outcome of the ecosystem not because actors perform consistently but because they don't (a change in the process produces what is seen as stability in the system).

In sum, in the beginning of our case (which still happens in the corporate routine) actors coordinated tasks according to the performance indicators defined centrally by top managers, and shared information about the inputs-outputs needed to achieve them [RR6].

They rarely discussed the scope of their tasks and although ideas about the changing context were present in informal conversations, their performances were mainly based on predetermined rules and previous experience. They were not challenged to cope with dual demands. The awareness to the duality "consistency/variability" required the combination of programmed and non-programmed (emergent) coordination, materialized in team scaffolds (Valentine & Edmondson, 2015). Recursively, the dual feedback loops developed by these teams sustained the salience of the duality over time, because they created a space in which both poles of the duality were discussed on a regular basis. This was a dynamic process, in the sense that sometimes actors discussed the dual poles and sometimes prioritized one of them (Smith & Lewis, 2011, Smith, 2014). This led us to advance the following propositions:

Proposition 1: There is a recursive relation between the salience of dualities at routine level and the routines' ecosystem design, in such a way that:

a) The salience of dualities in rhetorical practices at routine level influences the internal dynamics and the coordination of routines;

b) The coordination of routines influences the level in which dualities become salient, in such a way that transactional interrelations tend to produce single feedback loops that do not increase the salience of dualities, and decentralized discipline tends to keep contradictions alive in the discussions at routine level in dynamic processes that sustain dualities over time.

6.5.2. How routines evolve to decentralized discipline

The data reveals three mechanisms that self-reinforce a combined use towards decentralized discipline: enhancing dual feedback loops, contextualizing roles, and developing agents in the interfaces. In Table 10 we provide evidence for this insight and in

the following paragraphs explain how these mechanisms have been studied, and how our

study contributes to the literature.

Table 10. Data supporting the identification of mechanisms that led to decentralized discipline in the routine ecosystem (illustrative examples)

Transformative mechanisms	• *Enhancing dual feedback loops*: "We still follow a plan, of course, but quickly realized it was not possible to align the different engines if we did not share the files, because requests could change from one day to the other (…) we implemented weekly meetings to integrate all the information in the KPIs, and we also use skype, email, phone (…) constant communication is key, we also do it informally." [RM1] "These meetings are important to develop a shared view of what the clients and partners want, and of what other teams are doing in each moment… this cannot be set in advance!" [ITSE3; ITSE5; ITSE9] "Because we were operating from different locations and with different aims, we reinforced the need for live meetings (…) weekly, monthly, and trimestral meetings, with different participants (…) this is very important because we have to constantly experiment and realign" [ITSL1;ITSL4] • *Contextualizing roles*: "The recruiting routine established at ITServ is very similar to the one observed at corporate level, but the way it connects to the other routines is very different (…) tasks were reproduced inside the unit, but the roles are taken by employees with different specializations." [RR2] "The interviews are conducted by the managers themselves, not by us (task performers in recruiting), because they know better than us (…) they talk the language of the candidates (…) I conduct some myself, but that's because I was an operational manager before I assumed the responsibility for People Connect" [RM2] "We do not use strict guidelines so that each manager can evaluate the candidate according to different criteria, although we ask them to fill a form with a summary of their evaluation and decision" [RR9] "If we think the (external) partners are better prepared than the managers, we may ask them to evaluate the candidates and then send us the CVs so that we can incorporate the information in our database" [RM2] • *Developing agents in interfaces*: "There is a lot of administrative work to perform (…) they (task performers) do it very efficiently and we are now developing an IT support system to help (…) facilitates tasks by connecting different databases that are now integrated manually (…) but when we meet we discuss different things, not only the KPIs (…) we are aware that we need to do this efficiently but also hire different profiles to proactively match what our clients and partners need" [RM1] "As our leader says, systemic view is very, very important (…) I may report to a different manager, but when I come to these meetings I am concerned with the entire system (People Connect), because I have to understand what JC needs and if this is better filled by me or by E. (Network Enrolment Manager)" [RR4] "To promote this shared understanding of how things are done here (People Connect) some people rotate from one task to the other (…) one year to learn, second year to change" [RM2] "None of us would know this alone (…) this is why I always call E. before I start the process, because she may have a better answer at that moment" [NE1] "When I chose my team I already picked the people that are able to understand the different needs because this is not easy to do" [RM1]

The first mechanism, enhancing dual feedback loops, emerged from the practices of

the actors when they were confronted with the need to address a duality (present in the

rhetorical practices of the routine manager). The emergence process was not purposeful, but

very similar to what is studied as performative-ostensive cycles that conduct to coordination

(Jarzabkowski et al., 2012). These cycles incorporate dynamic activities continuously created

and modified in order to enact organizational relationships and activities. In our case they

were materialized in "continuous exchanges of files" [RM2], "weekly meetings" [RM1; RR1 to RR12], "promoting experimentation" [ITSL1], and "informal communications" [RM1, 2; V1 to V20]. They led the ecosystem to decouple from the centralized mechanisms reliant primarily on programmed performance (the half-year recruiting plan and the standardized profiles) to decentralized mechanisms with a complementary feedback loop, emergent, non-structured, and not necessarily reproduced in subsequent interactions. This was observed in the increased number of events that are formal and informally used by actors in People Connect's interfaces to share information and negotiate understandings, with team scaffolds (Valentine & Edmondson, 2015). Coordination mechanisms are very diverse and routines themselves fulfill this role (Okhuysen & Bechky, 2009) but non-routinized coordination mechanisms used in routine ecosystems are understudied (Parmigiani & Howard-Grenville, 2011).

ITServ's case shows scaffolded behaviors changing the coordination of routines, thus the production of variable outcomes by the ecosystem, while reducing uncertainty in behavior by locking actions with rules of compromise and believes of agents. Coordination through centralized programmed performance allows actors performing a task to remain largely ignorant of the actions taken in other tasks, even when they are interdependent (Kremser & Schreyögg, 2016). Our data reveal that decentralized coordination can achieve the same goal, by increasing the reliance on the professional competence of actors (even when not working with them on routine tasks). When believing that other agents are diligent in accomplishing their tasks, agents enhance coordination (Okhuysen & Bechky, 2009). In this sense, coordination was achieved by establishing dual feedback loops in the ecosystem, though rules of compromise that bound actions in more flexible ways, allowing mutual adjustment, informal communication, and improvisation. This is relevant to the literature on management dualities because it shows that when dualities are discussed by the managers and other actors

that directly supervise and enact tasks (in this case, in the routine ecosystem) they can create feedback loops that orient actors to pre-established goals but also to emergent concerns related to the reconciliation of conflict interests of users. In this sense, the duality consistence/variability is addressed by taking short-term options (e.g. either the task performer is the same or is different across task cycles) but introducing agents' rotation in roles, thus increasing the set of choices that are used in the long-term. The case thus shows that introducing dualities in the rhetorical practices created dual feedback loops (and vice-versa) that decentralize coordination but increase disciplined behavior via compromise and shared believes, which led us to advance the following proposition:

> *Proposition 2: The incorporation of dual feedback loops in the routine ecosystem enables decentralized discipline.*

The second mechanism, contextualizing role taking, was observed in the duplication of parts of the routine (e.g. attracting candidates) in different points of the ecosystem (corporate, business unit, team) so that the role could be fulfilled by different agents, each specialized in different matchings of interests of users in the two-sided network (e.g. experts in different technologies, industries, business practices, digital design). In ITServ, these agents can change daily and may not be formally allocated to the routine but rather come from any area in the company or even from an external partner. While showing little variance in the ostensive pattern, this mechanism nevertheless formally reinforces the use of different interpretive schemata in the enactment of tasks. At first, the use of different actors in roles (even outsiders) disrupted the transactional coordination previously used because these actors do not necessarily know how their task connects to other tasks, which oriented actors to absences in coordination (Jarzabkowski et al., 2012) that were addressed with the dual feedback loops produced in the ecosystem.

Role design is a recognized mechanism used to coordinate collective action (Okhuysen & Bechky, 2009). ITServ's case shows that when it incorporates the possibility to use different actors (chosen from a set of recognized experts that nevertheless do not usually work together), it creates different performances but still reduces uncertainty in behavior because the choices of the task performers are the result of team scaffolds. Visible, local, agile teams with rotative agents match interests and make sure that the most competent agent fulfills each task cycle, thus increasing the shared believe that professional judgment is being conducted by someone that has the ability to do it ("They know what they are doing, so much better than I would. So when the candidate talks 'tech', they make the interviews because they talk 'tech'. In this way we can adapt in each situation" [RM1; RR8]).Dualities are thus sustained in the discourse over time, as the need to decide for repetition/variability will arise constantly in the team meetings.

We also contribute to previous models of routine (re)creation by showing how opening roles to rotative agents enhances simultaneous variability and persistence of routines (Dionysiou & Tsoukas, 2013; Howard-Grenville, 2005; Parmigiani & Howard-Grenville, 2011). This extends current knowledge on how routines can be recreated in environments in which agents do not necessarily increase expertise on tasks and can rotate among internal (employees) and external (partners) individuals. In sum, the data reveal that role design can be used to enlarge the set of behavioral choices legitimated in roles even when the set of choices of each individual agent does not necessarily increase. At the same time role desin can enhance discipline by keeping the ostensive pattern stable (agents in interacting routines operate in the believe that the role will be fulfilled, even if by different and changing actors). This insight led us to advance the following proposition:

> *Proposition 3: Routine design that contextualizes roles will increase decentralized*
>
> *discipline in the routine ecosystem.*

The third mechanism, developing the ability of agents to address dualities in the interfaces, is both a requirement and a consequence of the former two and points to the need to develop systemic view to enable duality management at the level of the ecosystem, but also that cognitive complexity is not a necessary condition in all parts of routines. Rather, knowing in practice (Oslikowski, 2009) as an ongoing social accomplishment was the key to develop decentralized discipline. The literature tells us that routines are never the result of mindless repetition, but instead are (re)created and performed by mindful actors (Feldman et al., 2016). However, these actors are usually constrained by very specific operating rules that establish a small set of choices to select behavior from. By making decisions on how to contextualize roles and develop dual feedback loops, agents become more conscious and knowledgeable employees, aware of the plurality of schemas used in the ecosystem and of the need to manage conflicting demands.

Dual feedback loops are enhanced in the ecosystem by developing a systemic view in the interfaces, which keeps meanings open to discussion. To accelerate the development of a systemic view, employees were "invited to assume different roles in different routines over time, including roles in and outside the organization" [RM2]. The emphasis was on "promoting a comprehensive understanding of how People Connect operated" [RM2], and not on how they could individually increase expertise in a specific task. This is also a change in the traditional way of designing the tasks and the role of agents in tasks, and allowed ITServ to operate with less expertise in tasks while compensating it with more dynamism in the coordination with team scaffolds. Knowledge about dualities may not be necessary in non-interface roles. In this sense, our case shows that individual cognition and collective sensemaking processes, while generating change in performances, contributed to consistent behavior in the ecosystem, which led us to advance the following proposition:

Proposition 4: The ability to address dualities in the interfaces is an important enabler of decentralized discipline, but cognitive complexity is not a necessary condition in all parts of routines.

6.6. DISCUSSION

Through inductive research, we expand theory on management of dualities by showing how they are addressed by recreating configurations of actions in routine ecosystems in the complex contexts of two-sided global networks. The case here reported reveals how one routine – recruiting – previously incorporated in a local ecosystem in which tasks were coordinated with single feedback loops, programmed performance, and narrow scope roles, was recreated in a global ecosystem in which programmed and emergent performance goals generate dual feedback loops, roles are contextualized, and agents develop the ability to discuss conflicting demands. The transformation was triggered by the failure of a previous routine in presenting timely outputs to address management dualities. For analysis and writing purposes the case was simplified. The routine ecosystem was reduced to a simple visual schema that shows the connections of only a few relevant routines, and the analysis of dualities was reduced to the interplay of only one strategic (standardization/adaptation) and one performative (consistency/variability) duality. While our case was much richer in the set of dualities and routines visible in the data, we believe this simplification helps theory building, as it uncovers relations between practices (discourse and organized action) and important drivers of change (rhetorical practices, feedback loops, role design, and the agents' individual abilities) while keeping the model simple to the reader.

Our contributions to current literature on management dualities come from three insights. First, we bring empirical support to dynamic models of dualities management by showing how dualities become salient and transform in the rhetorical practices at different

levels in the organization and may be addressed with short-term resolutions that nevertheless sustain the duality over time (Smith, 2014; Smith et al., 2017). Second, we show how dualities can be addressed by reconfiguring actions in routine ecosystems. This is important to explain how repetitive patterns of actions can be rearranged to produce flexible responses that address conflict demands. Third, we accentuate the points in the routines ecosystem that may have a disproportionate impact in routine transformation towards duality management, and yet remain largely understudied: the interfaces between routines (Kremser & Schreyögg, 2016).

Research on dualities found different factors that influence their salience to actors, some regarding the sensemaking structures they use and others regarding the contextual features that constrain their experiences (Smith & Lewis, 2011). Our data corroborate earlier research that emphasized the role of managerial discourse in increasing/decreasing the salience of dualities to their teams (Putman et al., 2016; Smith & Lewis, 2011), but revealed additionally that the type of connections between tasks can also be a contributing factor. Strategic and performative dualities can both embed in rhetorical practices, and thus influence the individual schemas used by actors when selecting behavior (Smith & Lewis, 2011). Research is needed to understand how they interplay in the interpretive schemata of actors, although this was not a concern in this study. Our concern was with the influence that dualities may have on the type of organizing options considered to design routine ecosystems, and vice-versa. Our data suggests that when managers use metaphors that require dual thinking in their discourse (e.g. both/and, balance, connect), the use of programmed performance to coordinate tasks seems insufficient. Agents responsible for integrating information and negotiate meanings in the ecosystem discover absences in coordination that in this case were addressed by changing the overall design of the ecosystem.

Regarding the configuration of actions that can be used to address dualities in ecosystems that integrate routinized and non-routinized behavior, we suggest that beside the strength and the direction of relationships between actions (Kremser et al., forthcoming), research gains from considering qualitative descriptions of different designs that translate holistic features of the system. We argue that this is valuable to appreciate the type of interrelations that are established in the ecosystem, thus emphasizing how they can be designed to achieve coordination. Coordination can be enhanced with several mechanisms (Okhuysen & Bechky, 2009). In the case here reported coordination was achieved in the traditional business model by means of programmed performance, in which dualities were centrally translated to priorities that materialized in performance indicators. Strategic and routine levels were in this way connected by single feedback loops that established information channels to self-reinforce the choices of top managers over dualities. Along time dualities were embedded also at routine level, which required a different type of coordination, designated in this study by "decentralized discipline". Programmed performance was not eliminated, but the rhythm of control changed (plans were adjusted weekly), and the interfaces or routines enhanced irregular and dual feedback loops that keep the duality present in the rhetorical practices of agents.

We are not aware of research that explains how dual feedback loops can be enhanced in routine ecosystems and in this sense we also bring contributions to the literature on routines. We present a few mechanisms that were used in the case of ITServ to enhance them, such as the team scaffolds produced through formal and informal communication channels, and constituted spaces in which shared understandings about the dual demands can be regularly negotiated. This case was important to show how interfaces of routines can dynamically combine programmed performance mechanisms with non-programmed discussions, to address dualities. We call on future research to investigate other types of

enhancing mechanisms and on the possibilities of combining different types of coordination mechanisms to change the routines' internal dynamics and the interfaces in the ecosystem.

A second important coordination device that was used to reconfigure actions to address dualities was role design. This mechanism is used in traditional business models (Okhuysen & Bechky, 2009) to clarify the boundaries of tasks, legitimize the set of behavioral choices that agents can use, and formalize the requirements of repetition to increase efficiency. We show that it can also be used to address dual demands in dynamic ways. Usually roles are designed with narrow scopes and call for expertise in tasks, which decreases the ability to address dualities at routine level. Our case shows that roles can be designed to promote flexibility, by considering the possibility that agents (both insiders and outsiders) assume temporary and rotative roles in the ecosystem (and beyond) and that the decisions of matching agents to roles is also made by the ecosystem (by team scaffolds). Using different agents in one role broadens the set of choices that are used in the ecosystem without the need to increase the set of choices that each agent individually uses. Making agents rotate among roles increases their shared understandings, opportunities to negotiate meanings and carve new tasks, promoting systemic view.

The last coordination device identified is related to the individual characteristics of agents in routines. These were also salient in our data as an important driver to address dualities, though only at specific points in the ecosystem. We confirmed that the individual abilities of routine managers are important to translate strategic dualities to performative dualities and to introduce them in the discussions held by routine agents. Additionally, we argue that some task performers may also need to develop cognitive complexity to facilitate systemic view in the ecosystem, but also clarify that not all agents might need it. The emphasis should be on the creation of system views supported by dual feedback loops in the interfaces of routines, because this will sustain the salience of dualities over time. Coping

with dualities at the individual level may require cognitive complexity (Putman et al., 2016) but dualities can be sustained at collective level even when most agents are not aware of them. Routines are usually associated with processes of repetitive actions that can be allocated to agents that are deemed to be experts on the tasks, not on complex interpretive processes. We emphasize that most task performers can remain largely unaware of dualities or that this is not relevant for performance, if they share the believe that other agents are integrating the information and adjusting the plans. In this sense, we show that dualities are sustained by using them in rhetorical practices of some agents and by allowing temporary team scaffolds to handle discrete manifestations of contradictory options, while most actors remain unaware of them.

Our third contribution to the literature on dualities relates to the importance of interfaces between actions organized in routines. These points in the routine ecosystem, even if mostly characterized by non-repetitive actions, should be studied as an important part of coordination and a powerful mechanism for transformation. With this insight we also contribute to the literature on routine recreation. The interfaces of routines in their ecosystems became by large our focal point of interest as the interpretive process proceeded. This happened because we realized that when research emphasizes the internal dynamics of routines, the interfaces may stay understudied in the sense that they can be decoupled from the routinized behavior (they may not fall into the definition of a repetitive pattern of actions). Yet, studying them as a different phenomenon will hinder theory on routine recreation to address dualities, as the interfaces may have a disproportionate impact in routine transformation. Future research is needed to understand how the location of interfaces in the network of tasks (both inside and between routines) and the type of feedback loops they create in the entire system can trigger or enhance transformation and particularly the ability to address dualities at routine level.

While this was not our primary concern in this study, we also contribute to the literature interested in the specific context of two-sided global networks, by suggesting that the interplay of users with different interests in the network raises conflicting demands that might become complementary or contradictory and thus should be understood from a dynamic perspective, by identifying three strategic dualities that may become salient to top managers as the network grows, and by explaining how dualities are addressed by routines' ecosystems. This insight can be useful to understand how firms develop dynamic capabilities that allow them to drive strategy into action (Harrel, O'Reilly II, & Tushman, 2007) and quickly respond to shifts in the network.

6.6.1. Contributions to management practice

Our study brings a different and important perspective for managers on the possibilities to use routine design as a means to address dualities, by contextualizing them in routine ecosystems. Earlier perspectives considered the need to build consistent behavior *in routines*, making it difficult to explain how actions can simultaneously answer conflicting demands. We zoom out of the routine to understand how consistent behavior can be achieved *out of routines* but *in the routine ecosystem*. When a changing context is the underlying assumption in daily interpretation of the business reality, managers must proceed from the hypothesis that actions in routines can/must change from performance to performance, and thus should be careful when connecting them with input-output logics that rely heavily on programmed performance to ensure coordination. This type of design creates rigid path dependencies that hinder agile answers to changes in priorities (Kremser and Schreyögg, 2016). Nevertheless, they can still build consistent behavior and thus reduce uncertainty if the ecosystem readjusts to accommodate the changes at performative level with mechanisms that

keep the ecosystem stabilized (in this case, a system characterized by decentralized discipline). This insight should allow them to (re)create routines that are capable of handling dual demands, by readjusting the interrelations with other routines.

6.6.2. Limitations, boundary conditions, generalizability, and future research

As with any single-firm study, it is important to recognize that our findings may not be generalizable to other contexts. Some highly specific features to this context worth highlighting are the nature of the service provided by the business unit at study (IT consulting), and the structure of the company where it is formally incorporated (operated for more than five decades within a global company). These features made specific strategic dualities salient in the organizational schemata over the years studied, which might not exist in other cases. Moreover, as identified in earlier studies of the routine, recruitment is a critical routine for organizations, particularly in a services' company, as the decision on inclusion/exclusion of members is an important boundary work for any organization (Rerup & Feldman, 2011). Routines that are less critical might have a less pronounced transformation.

Recognizing these limitations, our intention was not to position ITServ's initiatives as a template for all other firms to follow when addressing multiple strategic dualities, but only to offer conceptual generalizations with an illuminative case that brings visibility to some mechanisms that support the evolution of routines to answer competing dualities, opening new territories for future research. We hope to inspire future researchers at least in two directions. First, in extending understandings of how repetitive actions and interpretation processes that require non-repetitive actions can be combined to address dualities in routine

ecosystems. Second, in investigating how this is influenced by the contextual features of the industry and organizational models, as our study was limited by its own context.

6.7. CONCLUSION

Organizing collective action has for long relied on linearizing chains of repetitive tasks and single feedback loops that connect them in transactional relationships. Routines have been used as an important means to direct collective action to a pre-determined set of organizational priorities and thus reduce uncertainty. Yet, the metaphor of a chain in which tasks interact in programmed supply-demand relationships has proved obsolete to understand disruptive business models that connect users with divergent interests in contemporary business models that operate on a global scale and require the ability to address dual demands that become complementary and conflicting in dynamic ways. Routines are still important to enhance coordination in these systems, but research that emphasizes singular routines or the internal dynamics of routines may be insufficient to understand how to address dualities, because it might miss the asymmetrical impact of interfaces that do not abide to the definition of a repetitive pattern. We report on the relevance of these interfaces to address dualities and on how managers can explore them to transform the routine ecosystem, when they wish to adopt the innovative organizing model of a two-sided global network.

CHAPTER 7. DISCUSSION

The three explorative studies presented in Chapters 4 to 6 provide important insights on how managers enact the duality "standardization/adaptation" through organizing processes that connect them to the environment that they experience, how this process relies on interpretations that change over time, and how they organize actions to address the duality. In this chapter these insights are brought together and summarized in terms of contributions to the literature on management dualities, sensemaking, and networks of routines. The focus is always on the international/global context and the studies also contribute to the discussion on what sets this context apart from others and on how research on this context can provide important insights for others contexts.

7.1. EXTENDING THE SCOPE OF STUDIES ON "STANDARDIZATION/ ADAPTATION"

The dissertation begins by questioning the way the duality "standardization/ adaptation" is currently studied in the literature as (1) a duality that becomes salient in strategic decision-making processes (2) to cope with the multiplicity and flux existent in the international/global context (3) coming from the co-existence of different national cultures, and that (4) can be more efficiently addressed by managers that possess certain traits. The studies show that this research (1) uses a narrow understanding of organizing processes (2) that hides deep intertwinements of individuals and environments, which (3) create different cultural dynamics that (4) cannot be fully understood in terms of fitting individual traits with cultural dimensions. I argue that current literature can gain from (1) understanding organizing as a duality of design and action (2) that relies on manager-centric organizing enactments of

context, (3) which are not always related to national culture, and (4) can be addressed by both developing complex sensemaking processes and (re)organizing networks of actions. These four arguments are explained next.

(1) Understanding organizing as a duality of design/action. As organizing agents, managers influence collective action by envisioning goals and configurations of actions, and deploying them through programmed performance mechanisms, allocation of resources, and discursive practices (Puranam et al., 2011). These organizing endeavors are not exclusively acts of design (organizing abstractions), which is evident in the first study that observes managers as enacters of environments. Process studies on how firms address dualities are scarce (Birkinshaw et al., 2016) and the overemphasis on the strategic level tends to consider the duality as a mere design challenge, which might prevent the recognition of problems that arise when managers are not able to connect design (abstractions that consider options away from situations) with action (dependent on socio-material elements in situations). This is discussed in the second study, in which managers identify the need to use many levels of reconstruction/deconstruction and translation of meanings to connect the concepts that they use to think and talk about this duality with the understanding of how they are implemented by teams. The scope of studies on the duality "standardization/ adaptation" should thus be extended by using a more comprehensive understanding of organizing processes. Organizing should be understood as a duality of design/action, in such a way that design and action can be analyzed separately but in interdependence because both rely on sensemaking and one determines the other (in the sense that design closes/opens possibilities to action and actions close/open possibilities to design). This said, there is much to do in future research, as the many manifestations of standardization/adaptation in design/action will only be understood by complementing the research at strategic level, with research on the interdependence on design and action at performative level.

(2) Complementing context with manager-centric enacted environments. Context is not just a stimulus environment, it is also a creation of actors. Theories that describe contextual dimensions outside of managers and relate them to stable cultural structures, cannot provide explanations on how they seem to impact some work environments but not all (Devinney & Hohberger, 2017). Context should instead be seen as a nested arrangement of structures and processes where the subjective interpretations of actors enact their own realities (Pettigrew, 1990; Weick, 1979). In this sense, research on multiplicity and flux as contextual features should be complemented with emic perspectives that show how managers enact these features in work environments. The studies contribute to this discussion by introducing a different way of observing context that can be used to build the micro-process bridges that bring strategic and cross-cultural research together in the international context (Brannen & Doz, 2010). The first study makes a case to extend current understandings on context with sensemaking theories, in which the relationship of managers and environment is duly considered (Luhmann, 2013; Weick, 1979). It contributes to knowledge on how managers organize interpretive frames by uncovering the processes of centering, leveraging, switching, and bridging, used by managers to enact different interplays of multiplicity (from consensus to plurality) and flux (from stabilization to fluidity). It also shows that enactment depends on socio-material conditions, such as the physical connectivity of managers and teams and the expectations regarding the framing processes. Choices on standardization/adaptation might be interpreted in different ways by managers and teams, which is an issue developed in the second article. In a sense, all configurations of actions imply change to some teams, which means that the managers' choices may backfire through resistance. This resistance can be better understood by research that uses the concept of enacted environments, because it allows researchers to consider that managers and teams might be phenomenologically working in different contexts.

(3) Understanding standardization/adaptation in relation to culture. The first study shows that while all managers conceptualize multiplicity and flux as features of the international context and attribute it to the fragmentation of national cultures, not all enact these dimensions in the work environment. It also suggests that extending theories on national culture by combining it with organizational culture (Burns et al., 2014) is not sufficient to explain how managers create different backgrounds for work. The study points to the need to conceptualize the influence of culture in manager-team interactions with more dynamic models. To researchers that wish to integrate the findings with current understandings of culture, the study offers the concept of partial activation (Luhmann, 2013) to explain how interpretive frames that are seen as manifestations of different national cultures can become dormant in the work environment. This is important to explain how managers make different options towards the duality standardization/adaptation, as some tend to enact environments in which frameworks, tools, and interpretive frames are mostly replicated, and others enact environments with high plurality and fluidity, in which both poles of the duality tend to become salient simultaneously. Thus, the co-existence of different cultures in the international/global context will not always make the duality salient to managers when they are organizing the work of teams.

(4) From fit to dynamic integration of sensemaking and action. The manager-team cultural fit as an explanation for managerial success in international/global contexts is limited, as it focus on structures (individual traits and national cultures) and fails to notice the dynamism in framing processes (Devinney & Hohberger, 2017) and in actions/routines (Feldman et al, 2016)). The first study brings the concepts of "enactment" (Weick et al., 2005) and "partial activation" (Luhmann, 2013) to show that sensemaking processes might reduce the impact of "national culture" in work environments. The second study shows that these sensemaking processes change over time. These concepts bring important contributions

to international/global management theories. They show that the interactions with teams are influenced not only by the structures of interpretive frames that individual actors bring to events, but primarily by the process of activation of these interpretive frames (in the situation and through time), which create smaller scale subject-centric backgrounds to interactions (enacted environments) that should be introduced in future research. Explanations for success coming from "cultural dimension-individual trait fit" should thus be complemented by knowledge on the processes used by managers to differentiate and integrate frames in the work environment. The third study shows that these processes will determine the way managers understand the duality standardization/adaptation at strategic level, translate it to performative dualities, and select configurations of actions to address it.

7.2. INCREASING THE VALUE OF RESEARCH IN THE INTERNATIONAL/ GLOBAL CONTEXT

International/global business and management research is reflexively considering the value of separating this field from more generic fields of research (Brannen & Doz, 2010; Bird & Mendenhall, 2016; Cheng et al., 2014; Griffith et al., 2008). The value of research in the international/global context can increase by both focusing on what is different in the context and what has the potential to generalize findings to other fields (Cheng et al., 2014). The features of multiplicity and flux that have been identified by researchers and practitioners in international contexts (Mendenhall et al., 2012) and their relation to "culture" are highly salient in international contexts but may also be found in other contexts. In this sense, the studies reinforce the notion that the international context is an interesting set to discover important dynamics that are less visible in other contexts, such as the co-existence of disruption and continuity in business transformations, the dynamics of culture and enactment

of interpretive frames, and the effects of technology and physical distance in work environments.

a) Disruption and continuity. The international environment is changing very fast. This is clear in the literature, in the interpretations of the participants in the studies, and in the observation of one business unit's transformation over five years. The research was deeply influenced by the disruption observed particularly in the last study. ITServ's transformation turned out to be related with more than the international expansion that the study started to observe, which shows that international business is both the driver and the stage for disruption in business and work practices. If there was ever a time when organizing in the international context could be analyzed separately from these changes, this is not the case any longer. Organizations are increasingly adopting new business models to accommodate new forms of connecting to stakeholders located and influenced by practices in distant geographies (Massa et al., 2017). These models operate with no recognizable boundaries between providers and clients: providers can become clients, clients can become providers, and both can operate as employees for short or longer periods (Alstyne et al., 2016).

The international/global business field will have gains from o incorporating understandings on these disruptive ways of operating across the globe and, at the same time, can contribute with existent theories to understand these new models. While this was not the primary concern of the study, it shows that the international/global business context is an important site to empirically conduct research on two-sided networks, and suggests that the interplay of users with different interests raises conflicting demands that might become contradictory and thus can be understood from interdependent and dynamic perspectives on dualities (Smith, 2014). This study opens a dialogue between researchers interested in the international/global context and in the context of two-sided networks, because they show a deep intertwinement.

The case also shows that disruption may co-exist with continuity in the same organization, which calls for an open dialogue among researchers concerned with the new organizing models, and researchers that have been studying the international context for long (Massa et al., 2017; Devinney & Hohberger, 2017). In international/global organizations, disruption of business models will not hit all locations in similar ways. This was also clear in the first and second studies that uncovered different realities brought in the narratives and experiences of managers, as they identified different rhythms of technological and social adoption of new practices. Studying how these different rhythms of change in business and society are brought together when organizing work in international/global companies is thus not only important to the field of international management studies, but to understand complex organizing endeavors in many aspects. There is an opportunity here that should not be taken lightly by researchers that want to increase the value of research in international contexts.

b) The dynamics of "culture" in research extrinsic to international business contexts. Concepts of "culture" and "cultural differences" are relevant in many contexts, although theories of culture are largely developed in connection to international business and management research. The first study contributes to the understanding of how culture influences context with more dynamic views on work related interactions. The concept of enacted environment proposed in this study can be used to explain contradictory findings in research that uses "national culture" as a control variable (Devinney & Hohberger, 2017). While this control is largely used, explanations for discrepancies are scarce. The dynamics of partial activation used in this study can complement the analysis of the control variable (national culture) providing a mechanism that might moderate its effects on work environments. The study shows that in some work environments the interplay of many

interpretive frames overcomes the influence of national culture, which should inspire future research to consider this explanation.

   c) Technology and physical connection in space. Technology changes the possibilities and the rules of communication and work (Hardy & Thomas, 2015), and the studies contribute to uncover its relevance to organizing endeavors. All studies confirm that globalization increased the use of technology to overcome coordination challenges coming from geographical distance. The first study shows that it constrains the enactment of interpretive frames in collective sensemaking processes. We could see an increasing recurrence and a paradoxical effect of virtual interactions: while technology increases the possibilities to communicate, it tends to decrease the possibilities for collective meaning negotiations, by selecting one dominant frame and pushing conflict away. The second study shows how technology is increasingly decoupling the role of the designer from the role of the enacter, and points to the dangers of emptiness and blindness to organizing endeavors, that may arise from this decoupling (Weick, 2010). The third study shows that technology can be used to increase coordination in networks of actions. The impact of technology might become more salient in international contexts, as managers and teams regularly interact at a distance (Mendenhall et al., 2012). Nevertheless, the potential for generalization should not be undervalued. Technology is also increasingly used by managers and teams that work in the same physical space, and thus the international business literature can contribute to studies that seek to understand group and team dynamics that are channeled through technology, which also happen in other contexts (Waller et al., 2016).

7.3. MORE COMPREHENSIVE AND DYNAMIC MODELS TO UNDERSTAND DUALITIES

In a recognizable effort to initiate a productive dialogue among perspectives, researchers on dilemmas, paradoxes, dualities, contradictions, ambidexterity, and balancing acts, have come together to find more comprehensive and dynamic ways of studying these phenomena (Putnam et al., 2016; Fairhurst et al., 2016; Smith et al., 2017). The studies contribute to this effort by showing that dualities lose value as mere abstractions and should be reconnected to their consequences on actions; dualities are not static phenomena and are addressed in dynamic ways by managers; and dualities can be addressed by configurations of actions that include highly routinized behaviors.

Dualities lose value as mere abstractions. Concepts and actions are connected through enactment processes, but they can also disconnect when systems engage in different levels of abstraction (Weick, 2010). This also happens when different theoretical fields engage in efforts of dialogue (Luhmann, 2013). Efforts to create spaces of dialogue among theories are important but one should also be aware that they necessarily raise the level of abstraction used to articulate concepts in meta-theories. The studies bring contributions from empirical research that connects the concreteness of the world to this dialogue. The importance of situated discursive and material elements in the social construction of contradictions has been addressed in the literature (Hargrave & Van de Ven, 2017; Putnam, 2015) and yet empirical research on the way contradictions instantiate in situations are still scarce (Smith et al., 2017). Academics that discuss dualities at high levels of abstraction do not usually explore the many levels of sensemaking needed to connect the managers' interpretations in strategic decision-making processes, with the situated actions of their teams that are necessary to deploy them into organizational life.

The second study revealed that managers can be trapped in processes that use too much or too little abstraction to understand contradictions. The third study revealed that strategic and performative dualities can both embed in rhetorical practices of managers and may influence the organization of collective actions. These studies are calls for researchers that are interested in bringing more action into abstraction. The reconnection of dualities as high abstracted concepts to situated actions may require a significant effort to deconstruct and reconstruct meanings and this process of translation is under-researched. The studies thus contribute to the literature on management dualities by uncovering the organizing power of dualities, not only over the thoughts and words of managers, but also on transforming actions. Complementary, they also show that when dualities lose the connection to actions, they may also lose its power as organizing devices.

Dualities are not static phenomena and are addressed in dynamic ways. The studies show that the effort to bring an integrated perspective on interdependence is valuable because dualities ultimately do not exist in isolation and transform across levels and time (Fairhurst et al., 2016; Smith et al., 2017). Moreover, the second study shows that when managers start understanding the interdependent nature of one duality, they change the way they see all dualities. This offers several contributions to the nascent literature on interdependence, related with salience, time, teamplay, and emotions.

Salience. Research on dualities found different factors that influence their salience to actors, some regarding the sensemaking structures they use and others regarding the contextual features that constrain their experiences (Smith & Lewis, 2011). Studies on salience are rare, and the studies contribute by empirically showing that dualities can become visible (and hide again) in individualized sensemaking processes (Study 2 in Chapter 5) and/or in the rhetorical practices at different levels in the organization (Study 3 in Chapter 6). This corroborates research that emphasizes the role of discourse to increase/decrease the

salience of dualities (Putman et al., 2016; Smith & Lewis, 2011) and reveals how different coordination mechanisms in routine ecosystems may also influence salience.

Time. Models of dynamic decision-making developed in the dualities literature show how managers shift their decision patterns, and can sustain both poles of a duality in the long-term with short-term choices in favor of one pole (Eisenhardt et al., 2010; Smith, 2014). In this sense, patterns of decisions over time are used in these models to differentiate and integrate dilemmas, dialectics, and paradoxes (Fairhurst et al., 2016; Smith et al., 2017). The second and third studies empirically corroborate these theoretical models by showing that managers do not develop preferences over strategies to handle one duality in a particular way, but instead change the way they see the environment, talk about conflicting demands, and deploy dualities into organizing endeavors. The third study also shows the power of sustaining open discussions on dual demands over time. While time seems important to research on dualities, it has not been clearly addressed. Research can gain from introducing different understandings of the subjective effect of time in constructing narratives about dualities. As managers describe in the second study, their options on selecting one pole of the duality might be understood very differently by teams, as they condensate their interpretations in a time narrative that might differ from the manager's. While the manager interprets that actions are being standardized, for instance, the team might understand that their actions are always changing. The interdependence of opposites might be created by these divergent narratives of repetition/change. This happens because managers draw a distinct narrative by being away from the daily interactions of their teams, which is a phenomenon that should be considered in future research.

Teamplay. All studies reveal that managers do not handle dualities alone. This is a matter that, while not openly discussed in the literature, underlies theories that see dualities as social constructions (Putnam et al., 2016). The second study goes further by showing that

managers can become aware of how they need their teams to enact dualities, which changes their understandings of organizing endeavors. The way they establish a dialogue with teams can thus change their sensemaking processes, as they start using the team as an extension of these processes. While the influence of other organizational actors in the deployment of dualities is recognized in the literature (Smith, 2014), this study shows that research is needed to develop knowledge on the contribution of teams to the process that transforms abstracted dualities into actions, and vice-versa.

Emotions. The sensemaking processes developed by managers to understand dualities through time are also interesting and underexplored. We extend knowledge on how managers build dualities through the use of complex cognitive processes, but also on how their development depends on experiences that trigger emotional processes. We found that when standardization/adaptation are discussed only as abstractions (e.g. conflicting strategic goals), and there is no effort to connect their meaning to concrete actions, managers seem to think and talk about them with analytical processes devoid of emotions. This could justify why research that tends to be situated at strategic level does not usually describe emotions in studies of dualities, but also alerts to the need to deepen it in future studies. We confirmed that negative emotions may hinder sensemaking (Lewis, 2000; Smith & Lewis, 2011), and contribute with the insight that they tend to diminish over time because managers become more tolerant toward different possibilities and incorporate "unexpected" as "expected" in interpretive frames. We also show the role of positive emotions, such as enthusiasm and pride, in creating engagement with the challenge of puzzling dualities over time.

Dualities can be addressed by configurations of actions that include highly routinized behaviors. Dualities are complex phenomena to systems that operate with linear reasoning. Addressing them with transcendence or synergetic strategies might require imaginative and creative new ways of organizing thoughts and actions (Putnam et al., 2016).

Because studies emphasize these creative processes, one might tend to believe that dualities cannot be addressed with repetitive actions. We show in the third study that this is not the case. Dualities can be addressed with highly routinized behavior, although managers may need to imagine flexible ways of coordinating them. The study offers examples of mechanisms that can be used to reorganize routine ecosystems to address a dual demand for consistency/variability in outputs. In the case here presented, this was achieved by changing the type of coordination, broadening the set of choices used in performances, and developing individual capabilities in agents. This contributes to a dialogue with both the literature on dualities and networks of routines by identifying the points in the routines ecosystem that may have a disproportionate impact in routine transformation towards duality management, and yet remain largely understudied: the interfaces of routines.

7.4. AN ECOLOGICAL UNDERSTANDING OF DEVELOPMENT AND TRANSFORMATION

To understand how managers organize collective action towards duality management is also to understand how they transform themselves, their teams, and the organizational processes, as they rarely start organizing endeavors from a clean state. The studies bring insights on the development of individual sensemaking processes over time, on the transformation of interpretive frames, and on the transformation of actions. The common theme that crosses these studies is a consideration of transformation as co-evolution. Current international management research offers mostly variance models to explain the antecedents of variables, but this view is always limited by the statistical processes used to identify them (correlation is not causation) and thus should be extended with comprehensive

understandings of co-evolution to find explanations that can question or strengthen their findings.

   Developing individual abilities. Coping with dualities at the individual level may require complex processes (Putman et al., 2016) and, specifically in the international context, global mindset (Levy et al., 2007). Current international management models use the individual characteristics of the manager as antecedents of their ability to cope with dualities (Devinney & Hohberger, 2017). The studies bring contributions on the importance of global mindset and individual abilities, and on how they can be developed, but also alert to the limitations of this line of research. The second study brings insights on how complex sensemaking processes are developed by managers, and the third study suggests that cognitive complexity might be important to translate and introduce dualities in the rhetorical practices, and change the configuration of actions. However, the first study alerts to other factors that influence the enactment of work environments, such as the connectivity with teams and their influence on the framing processes, which means that individual abilities should always be understood in context and integrated with views on team and group dynamics (Waller et al., 2016). This can be used to explain relations that were found in variance studies, by uncovering processes that moderate the influence of individual variables in different environments.

   Time, age, and tenure. Regarding the development of complex sensemaking processes, the second study shows that time is important, in the sense that more time brings more possibilities to experience different environments, but time does not translate in age or tenure. Instead it translates in the quantity and degree of complexity of subjective experiences in which managers were called to entail operations of differentiation (possibilities) and integration (decide/organize). This insight contributes to the literature on global mindset by offering explanations to why age and tenure correlate with manifestations of this ability.

While global mindset may take long to develop, "long" may not mean physical time measured in years, it should be rather understood as the time spent in differentiation/ integration experiences (which do not necessarily happen in cross-cultural training or short-time travelling). This is important to rethink the leadership development programs and human resources management policies that are being directed at creating larger buffers of global mindset in organizations.

Analytical and emotional processes. The literature shows that the individual development of global mindset may require the simultaneous development of several analytical and emotional processes (Story et al., 2014). The second study concurs with these views, and identifies the cognitive and emotional processes that might be used to accelerate the change. We suggest that development processes can be accelerated with learning experiences that trigger possibility, tolerance, enthusiasm, and pride.

Dynamic capabilities. We also offer insights on how managers can develop processes that allow them to cope with the risk of disconnecting dualities from their underlying actions, such as training in the deconstruction/reconstruction of meanings with savvier uses of abstractions and increased presence/direct observation of concrete situations, focusing on possibilities instead of solutions, developing the ability to combine self-reflection with dialogue, focusing on the enthusiasm of learning to overcome the confusion and the frustration of sensebreaking, and develop tolerance towards plurality. These insights closely connect to the literature on dynamic capabilities (Eggers & Kaplan, 2013; Wilden, 2016; Winter, 2013) and not so much on building variance models, but future research is needed to clarify how they can be introduced in current models and be generalized to other contexts in which other types of dualities may become salient.

Transforming clusters of interpretive frames. The first study offers the concept of enactment to explain how managers organize work environments in terms of interpretive

frames. It shows that they can create self-referencing and self-lock in their own interpretations, decoupling from the interpretations of their teams, or instead contribute to create work environments in which interpretive frames are constantly negotiated and co-evolve (sometimes do not institutionalize). This is important to show the role of managers as organizers through sensemaking, thus as enacters of thoughts and words in work related interactions. This face of organizing is mostly ignored in the literature on standardization/adaptation, which usually only explores the other face of organizing (managers as selectors of options and designers of configurations). The studies uncovered the importance of enactment to introduce small variations in work environments that can accumulate to create large transformations and large differences between environments (Luhmann, 2013; Langley et al., 2013). Further research is needed to identify other enactment processes and their impacts on organizing.

Transforming networks of actions. The third study expands knowledge on organizing possibilities that can be considered by managers to address dualities. The case reveals how a routine previously incorporated in a local ecosystem in which tasks were coordinated with single feedback loops, programmed performance, and narrow scope roles, was recreated in a global ecosystem in which programmed and emergent performance goals generate dual feedback loops, roles are contextualized, and some agents develop the ability to negotiate conflicting demands. Coordination can be enhanced with several mechanisms (Okhuysen & Bechky, 2009) and the study uncovers a qualitative difference between two types of systems, explains the role of dualities in the transformation, and identifies possible mechanisms of transformation. The paper is explorative and opens several possibilities to research. Future research should investigate other types of transforming mechanisms and the possibilities of combining coordination mechanisms to change the routines' internal dynamics and the interfaces in the ecosystem. The mechanisms identified are:

Programmed and emergent feedback loops. I am not aware of research on routines that explains how dual feedback loops are enhanced in routine ecosystems. The study presents a few mechanisms that were used in the case of ITServ to enhance them, such as the use of team scaffolds (Valentine & Edmondson, 2015). Further research is needed to confirm the proposition that dual feedback loops allow ecosystems to sustain dualities and can be used as transformation mechanism in different contexts.

Role design and agents. Role design and shared beliefs among agents are coordination mechanisms used in traditional business models (Okhuysen & Bechky, 2009) and the study shows that they can be transformed to manage dualities in dynamic ways. The case shows that dualities can be sustained at collective level even when most agents are not aware of them, if dual feedback loops and systemic view are developed in the ecosystem. Usually roles are designed with narrow scopes and call for expertise of agents in tasks, which decrease the ability to address dualities at routine level. The case shows that roles can be designed to promote flexibility, by considering the possibility that agents (both insiders and outsiders) assume temporary and rotative roles in the ecosystem (and beyond). This broadens the set of choices that are used in performances without necessarily increasing the set of choices that each individual agent brings to the task (thus cognitive complexity might not be necessary in agents).

Routine dynamics. The study also contributes to the literature on routine recreation, even when consciously parting from perspectives focused only on internal routine dynamics (Feldnam et al., 2016). The interfaces of routines in their ecosystems are the focal point of interest in this study to overcome a blind spot resulting from interpretations of what are routines. Interfaces of routines may not fall into the definition of a repetitive pattern of actions and thus are missed both by the strategy and routine dynamics literatures. Yet, the study shows that studying interfaces as a different phenomenon will hinder theory on routine

recreation, as the interfaces may have a disproportionate impact in routine transformation. Future research is needed to understand how the location of interfaces in the network of tasks (both inside and between routines) and the type of feedback loops they create in the entire system can trigger or enhance transformation and particularly the ability to address dualities at routine level.

7.5. CONTRIBUTIONS TO MANAGEMENT PRACTICE

The practical contributions of this explorative dissertation are also considerable and we summarize them at three levels: decision-making on organizational design, management and leadership development, and human resources management practices.

Decision-making on organizational design. The empirical data resonate with the common understanding (shared by all subjects in all studies) that organizations and environments are increasingly plural and fluid and that technology is changing the business models and thus the way collective action is organized. They also show that managers can cope with dualities in different ways, and that there is probably not "one best way" to proceed. Some configurations of interpretive frames and actions create rigid path dependencies that hinder agile answers to changes in priorities (Kremser and Schreyögg, 2016) and the studies show how managers can prevent them by designing systems that accommodate necessary changes at performative level with mechanisms that keep the ecosystem stabilized.

Management and leadership development. Development programs should alert managers to the dangers of possible manager-centric enactment of environments, emptiness or blindness in sensemaking, and of hindering collective sensemaking processes by decreasing the physical connectivity with teams. Developing self-awareness to these risks is a

first step to prevent them. Development programs should also help managers reconnect the abstracted dualities with the concrete actions that underlie them, and thus explore different strategies that can be used to enact work environments and to delegate decisions on dualities that might not be easy to translate down the management ladder.

Human resources management practices. The studies point to the need to rethink the way managers and teams are being recruited and developed, processes that tend to focus on a necessary "fit" between culture, manager, and team. These strategies sometimes lead to work environments in which plurality and fluidity are pushed out of interactions, which can reduce collective meaning negotiation and flexibility in the organization. The studies also help managers and teams to reflect and discuss dualities in a more fruitful way, which is important because as they clearly show, managers do not cope with dualities alone.

7.6. BOUNDARY CONDITIONS, LIMITATIONS, AND FUTURE RESEARCH

The debate on what is specific to international business contexts and what is generalizable to other contexts is an ongoing endeavor and there is strength in both specifying the contextual conditions and understanding the features that point to similarities with other contexts (Cheng et al., 2014). The studies are explorative and thus generalizability was not their intention from the start. However, one can say that dimensions of complexity, multiplicity, and fluidity are highly salient in all studies and they are not exclusive to the international/global context. Similarly, the separation between highly analytical and more emotional ways of understanding dualities might be more prone to happen in contexts where manager and team operate from a distance, which is more probable but not exclusive of international/global contexts. Moreover, although the third study uses a single-firm case, future researchers can be inspired by the findings.

As with all research, it is important to acknowledge some limitations, which was done in each study. Here I emphasize the primary concerns. The first is related to the possible generalization of conclusions. The studies offer conceptual and not empirical generalizations and in this sense, the subjects and the case study presented are used as "illuminative" cases to offer important insights to different fields of management research. This explorative research should be combined with future research in at least two directions. First, extending understandings of how interpretation processes and repetitive actions can be combined to address dualities in routine ecosystems. Second, understanding how the findings may be influenced by contextual features related to industry and business models.

Methodological limitations are related to the samples, the empirical material, and the writing process. Regarding samples and sampling process, the use of participants born and educated in Western management philosophies, although purposefully used to increase the communicative validity of the study, may be seen as a limitation in scope. Although the samples cover experiences in different parts of the world and interactions with different cultures, further research is needed to understand how national culture can affect the way managers interpret the work environment. The second limitation is related to the empirical material. Data on the first two studies are highly dependent on descriptions collected from interviews, and so they reveal the participant's own perspective. This constitutes both a strength and a weakness to research, as while recognizing the importance of the managers' interpretations to their strategic choices, it assumes a close relationship between their discursive practices and their interpretations. My previous experience of 13 years as a management consultant was used to critically analyze their discursive practices and search for deeper sensemaking processes. The interviews were complemented with visits to sites and observation of the participant's interaction with their direct team in three cases, although not all sites were visited. This constrains some interpretations and calls for future research to

complement research. For analysis and writing purposes the case presented in the last study was simplified. The routine ecosystem was reduced to a simple visual schema that shows the connections of only a few relevant routines, and the analysis of dualities was reduced to the interplay of only one strategic (standardization/adaptation) and one performative (consistency/variability) duality. While this simplification helps theory building, it may oversimplify the research for an uninformed reader.

CHAPTER 8. CONCLUSION

Managers have many roles in organizations, which transform over time. The role of the organizing agent has never been as relevant nor as challenging (Eggers & Kaplan, 2013; Puranam et al., 2012), particularly in the international/global business context (Mendenhall et al., 2012). The broader scope of action in terms of geography, the increased complexity in terms of co-existing possibilities, and the asymmetric rhythms of disruption that permeate the context, increasingly emphasize the need to make robust decisions on the processes that should be standardized/replicated across locations, the actions that should be adapted/changed, and the coordination mechanisms that should be used to direct them towards large-scale achievements (Benito et al., 2014). The role of the organizing agent is not to be understood as a role of a designer that imagines scenarios and builds models and plans that can be subsequently implemented. Organizing combines design with action in such a way that managers are the masters and servants of their own organizing endeavors (Luhmann, 2013; Weick, 1979). This role is also not to be understood as a lonely process that separates the actions of managers from the collective action. They are part of the collective (Wilden et al., 2016). They may step aside from the collective to imagine how it can be (re)organized to achieve large-scale goals, but they do not act away from the collective. When these goals are understood as separate options from which to select (one best way to go), they become selecting agents and their selection influences the organization (Eggers & Kaplan, 2013). When the options are understood as interdependent possibilities, they become something else (Smith et al., 2017). This dissertation uncovers the type of organizing agents they become and what organizing processes they enact, when engaging with this interdependent way of seeing the world.

Our increasingly interconnected world brings to light the real, the possible, and the unimaginable interdependent relations among organizing options, which were traditionally seen as opposites and disconnected (Smith et al., 2017). In the international/global context, organizing collective action has always considered options on standardization/adaptation but did not necessarily explore the interdependence of poles and how design options translate to actions of teams. In this dissertation, the literatures on international/global management, management dualities, sensemaking, and networks of actions are connected with three inductive studies, aimed to understand how managers organize collective action to address this duality. It argues in favor of seeing organizing as a duality of design and action (enactment) in which both poles are highly interrelated, and introduces theories on sensemaking and communication/action systems (Luhmann, 2013; Weick, 1979) to increase the value of research in the international context.

The duality standardization/adaptation ultimately relates to collective actions taken in specific situations, but can be articulated by managers with highly abstracted concepts, and from very distant places, and thus is not easily connected to the concreteness of situations. To understand what the options mean and how they interrelate, managers must deconstruct and reconstruct a cascade of meanings. The duality should thus be understood in terms of socio-material elements that manifest in situated contexts, which implies that current research must change the way "context" is used. The relationship between managers and context is central in this dissertation, and the studies here presented make several suggestions on how research could gain from interdependent views on this relation. The literature suggests that multiplicity and flux fragment the international business context, and that for this reason organizing cannot be thought of as mere replication of actions in different locations. We argue that although managers see this fragmentation in the business context, not all enact it when organizing the work of the teams that directly report to them. Managers enact

environments with manager-centric interpretations. They can increase or decrease the number of interpretive frames that interplay in work related interactions, can grant some of them legitimacy over others, and can institutionalize some as more permanent references in the organization. They are both helped and constrained by technology and by the interpretations and actions of teams. In their enactment, they open or close possibilities for collective meaning negotiation, which is important to address dualities.

Standardization/adaptation is associated with options to routinize or not the behavior of organizational actors (replicate and/or change patterns). Routines have been used as an important means to direct collective action to a pre-determined set of organizational priorities and thus reduce uncertainty. In a sense, all actions are routinized, but I concur with the voices that wish to study routinized and non-routinized actions in a different level of research in which they connect in ecosystems (Kremser & Schreyögg, 2016). This is as much relevant as the old metaphor of chain is abandoned to think about configurations of actions. In our contemporary global world, the idea of a "chain" in which tasks interact in programmed supply-demand relationships has proved obsolete. The studies here presented report on the relevance of less routinized interfaces between routines to address dualities and on how managers can explore them to transform the routine ecosystem, when they wish to adopt the innovative organizing model of a two-sided global network.

Dualities are important interpretation devices that help managers (and researchers) to make sense of the world, but this also means that they organize the world. For this reason, researchers have to find ways of empowering their theoretical abstractions with deeper understandings of situated actions. Organizing is a bit like getting the thunderbolt from the hand of Zeus and close possibilities to do things differently. Organizations are built from decisions that consider dual/multiple options before the thunderbolt strikes. In an ever-changing world, we are more than ever aware of the dangers of closing possibilities, but we

should also never forget that we can only build worlds from closing possibilities (Luhmann, 2013). The manager as organizer (and the researcher) in this organizing role, is always building worlds by pushing the possible away. There is strength in the possible, there is strength in the real, and there is strength in seeing both. This dissertation contributes to explore them all.

A last note on the role of researchers and dualities. We can introduce dualities in our discourse to show a double face to interdependent phenomena. This is already being done and is very important. However, the other side of dualities, which is as something that organizational actors also build and use in their discourse and in their way of understanding the world, and what is different when they use this understanding (when compared to when they don't) was somehow forgotten. We know that some of them talk about options as interdependent options, but we also know that some talk about options as something they must bring together with the use of balancing acts. So, what is different when they do it? And if they are managers, what is different to them and the way they influence the work of teams? This dissertation is a first step to uncover the answers. Managers change the organizational reality, not only because the way they think about dualities makes them different, but because their words are also actions. If they only talk about programmed performance, they only get programmed performance back. If they complement this by uncovering other organizing possibilities, they may find ways to lead the collective action towards more fruitful accomplishments. It is time that researchers uncover the full potential of dualities in influencing actions, and stop using them as mere devices to think about actions.

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