In Search of Time and Temporality: The Process of Temporal Reflexivity

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Time, like space, is a deep process/structure of human life at the conjunction of physical and symbolic reality made meaningful as a symbolically transformed environment (Lewis & Weigert, 1981, p.450)

Abstract

Following the footsteps of temporal structuring, this research is a pragmatic inquiry into the manifestations of time taking shape in the daily work practices of a business retail team. To apprehend time and its relationships to individuals and organizations, we conducted a 6-month interpretive ethnographic study in an e-commerce company. An abductive approach has been adopted to interpret events and processes that are occurring in context. Drawing from our understanding, we explored the participants' temporal reflexivity to define what we have called junctures. Temporal reflexivity is a deep-rooted notion of temporal structuring since it defines actors' temporal predispositions to perceive, interpret and relate to the significance of time. These junctures are formalized for the purpose to comprehensively map how individuals and context interplay in the two-way shaping process of temporal structures. With this paper, we aim to help to define how individuals apprehend, construct, navigate, and capitalize on time while they experience the organizational life in various settings. As a result, our typology illustrates that temporal structuring arises from and are rooted in the unique abilities of individuals to captures simultaneously the objective, subjective and intersubjective perspectives of time through their ongoing temporal reflexivity.

Keywords

Time (as well as space) has been a discipline of concern to sociologists, organizational researchers, philosophers, anthropologists, geographers and biologists that have attempted to represent multiple time metaphors. They have then designated time as one of the keys to understanding social systems. Therefore, the concept of time has been central to any inquirer of social life for over two centuries – from Newton's beliefs and Heidegger perspectives to Poe's proses. But time is a complex and a sensitive topic in reason to the different vantage points; and its meaning often tends to be taken for granted and given commonsense or self-evident attributions (Sahay, 1997). Everyone tries to answer the following question: 'what is time and what (kind of) time is it?' leading inevitably to ask ourselves 'what is the significance of time?' and 'what is its practicality?'

Everything people do involves time: going to the workplace, meeting deadlines, reporting to managers, developing stress (Robert A. Roe, 2005). Time in practice is an indispensable element of the everyday flow of life. Lewin, (1943) points out that individual experiences at work are naturally temporal. We then cannot dissociate the individual from the enfolding temporal environment.

> *The poorest pauper and the most powerful politician must each wait for the coffee to brew! To want a cup of coffee is to subordinate yourself to the time required to brew one. It does not matter if you will miss your plane or lose your job, the coffee brews on its own schedule, and you wait.* (J. D. Lewis & Weigert, 1981)

Events have a time span; actions have a time frame that highlights the urgency of (continuously) deepening our knowledge of time as a key component of organizations (Bleijenbergh, Gremmen, & Peters, 2016). In organizational studies, since the end of the 20th century, time as a construct has become one of the central topics of interest in the social and behavioral sciences. For comprehensive inquiries and reviews on time in organization please refer to existing literature (Adam, 1994; D. G. Ancona, Okhuysen, & Perlow, 2001; Bergmann, 1992; Bluedorn & Denhardt, 1988; Butler, 1995; Claessens, van Eerde, Rutte, & Roe, 2007; Clark, 1985; Fraser, Haber, & Müller, 1972; Fraser & Lawrence, 1975; Fraser, Lawrence, & Park, 1981, 1978, Hassard, 1991, 2002; McGrath & Rotchford, 1983; Mitchell & James, 2001; Zerubavel, 1982). The empirical literature on organizational time has extended research on time as a control variable of boundary condition (George & Jones, 2000; Langley, Smallman, Tsoukas, & Van de Ven, 2013) but also as an essential dimension of organizational life that organizational researchers ought to incorporate in all the steps of the research process. This paradigm shift was possible when researchers became aware that putting the temporal aspects of organizations into focus (Biesenthal, Sankaran, Pitsis, & Clegg, 2015) was needed to better describe human behavior (George & Jones, 2000) but also a requirement for the enrichment of organization studies (D. G. Ancona, Okhuysen, et al., 2001; Sonnentag, 2012).

While these research has advanced our understanding of the consequences of time for and on social systems, calls for research to focus on time have been raised over the years.

To this extent, we have made tremendous advancements but we are still lacking reliable findings of the consistency and magnitude of the time effects at each level of an organization and on individuals. Perhaps, the last progresses that drawn upon the sructuration theory (Gomez, 2009; Kaplan & Orlikowski, 2013; Wanda J. Orlikowski & Yates, 2002; Reinecke & Ansari, 2015; Rowell, Gustafsson, & Clemente, 2016) has suffered the same faith of being judged as too notional and not providing enough guidance on how to conduct empirical studies based on this conception.

Organizations are filled with temporal rhythms and norms that can dramatically impact organizations' productivity, decision-making processes and organizational changes (D. G. Ancona, Okhuysen, et al., 2001; Gersick, 1994; Webb & Pettigrew, 1999). People working in organizations are dramatically restricted by these norms or structures (Wu, 2010), but people are also resourceful and proactive players who might (intentionally or not) act dynamically to a given situation. Even if recent research studied temporal structures, a whole segment is yet to be explored to uncover further interlocks effects by examining participant's behavior and how their practices can be conditioned by working on and against structures that bear significant temporal features. We have then to consider how organizational participants are affected by situations containing temporal features, but also how these actors shape, by their behavior and beliefs, local context according to their needs.

We begin with a focused review of how temporal structuring has been one of the last advancement despite a positive number of researchers focusing on olden or alternative concepts to rightfully explain specific situations. Independently of the temporal assumptions and the epistemological stance, researchers adopting temporal structuring can both highlight the qualitative experience of time but also its quantitative and strategic use. We build upon this critical review of temporal structuring to decipher the topic of temporal reflexivity that creates the conceptual background to apprehend the data collected from our ethnographic study. Following the few studies that have adopted a temporal-structural lens (Granqvist & Gustafsson, 2016; Kaplan & Orlikowski, 2013; Reilly, Souder, & Ranucci, 2016; Reinecke & Ansari, 2015; Slawinski & Bansal, 2012; Slawinski, Pinkse, Busch, & Banerjee, 2015), we suggest a typology introducing the term of junctures to depict the process by which temporal reflexivity is enacted. By virtue of doing so, we wish to explain why and how an organizational participant is aware of the passage of time but also affected by the practice and norms of social life and simultaneously influenced by structural dimensions, more or less than others might be.

To realize this research, an ethnographic study was needed as we had to look for what may occur or have occurred and not merely what happens to the managed object over time (Hernes, Simpson, & Söderlund, 2013). We conclude by outlining that because few theoretical frameworks linking time and structures together (Peters, Vanharanta, Pressey, & Johnston, 2012) have been proposed we partially contribute to filling the gap of knowledge of how temporal reflexivity embedded within processes (interactions in time) enables the time structuring process to take place that, in turn, gives birth to time in the form in which it exists now and which is familiar to most people.

Time in Organization Studies

Time is a matter as ancient as thinking humanity and certainly will not be resolved here. That said, we have identified a plurality of metaphors about time. Since long before we may have succeeded to recall, theorizations about time that are relevant to our issue were ensnared in seeing time as an objective or subjective experience or the results of multiplex ties of some physical, cosmological, psychological, phenomenological phenomena (Cunliffe, Luhman, & Boje, 2004). For instance, the Newtonian time (a linear continuum) looks at time as divisible and equal at each instant whereas in opposition cultural time is the representation of the flow of time as unidirectional rather than bidirectional. Some exceptions combined both perspectives such as organizational time which refers to a combination of Newton's perspective plus a transactional view where time is seen as related to specific points in time in order to coordinate and measures activities and specific events. In organization studies, the most common time metaphor that refers to the objective perspective of time is the clock-based view of time (Hall, 1984) – a 'succession of now-points' (Shalin, 1986). Most authors refer to 'Chronos', i.e. time as a linear condition that is measurable and homogenous. In parallel, Thompson (1967) conceptualizes the action of partitioning, scheduling, use of time to influence organizations and people as the practice of 'time discipline', drawing from the strategic manipulation of time (Bourdieu 1977) that shows that time can be controlled and organized to structure organizational life (Adam, 1994; Zerubavel, 1982). For those reasons, time is seen as absolute, unitary, invariant, sequential, quantitative, mechanical and independent from human experience. It is deadline oriented, an exhaustible resource that can be saved, spent or wasted. Time is then an essential component to set the organizational contexts of action. For instance, time as recurring patterns to enable prediction, assess the organizational performance, or 'analyze the way the order-related activities are carried out' (Gunasekaran, Patel, & Tirtiroglu, 2001) through, for example, the notion of lead time[1].

But, time has also be seen as plural with multiple possibilities. Libet (2005) was aware of the necessity to bear in mind that time is plural and had a meaningful influence on his experiment of free will and human consciousness. The subjective view of time, 'Kairos', i.e. a socially constructed and experienced conception of time. Time is here seen as relative, organic, qualitative and dependent on human experience and subjective to multiple interpretations. Even though the clock-time perspective is predominant in the literature, scholars have advocated this plurality of times within organizations. The main reasons are that social systems function on clock time but can locally experience different understanding of time (George & Jones, 2000). To illustrate this point, (Hassard, 1989) opposes the social time(s) at the micro-level of groups and communities in opposition to systems and institutions at the macro-level. Time, as contextual features that are not easily manipulated (Chia, 2002) is being mostly formalized in organization studies around the event-based and process-based views of time (Halinen, Medlin, & Törnroos, 2012). Event time contrasts with

clock time, as it is defined by events, not by a timepiece. 'Events shaped by humans and enacted through social construction together form the event-time' (Halinen et al., 2012). This perspective suggests to look at interrelatedness of people and events as the human and living time of intentions and goals (Jaques, 1982) to perform, for instance, cause-effect analysis studying the linkages in time.

Process time draws from process theory: 'the river is not an object, but an ever-changing flow; the sun is not a thing but a flaming fire' (Rescher, 1996). Process time means motion, in the sense of the flow of time and to look at actions as a temporal process that is dynamic and an open-ended flow of events (Flaherty & Fine, 2001). The process view aims to interpret interactions through which time affects organizational issues such as activities, information, and knowledge by looking at the passage of time.

Foundations for Understanding Temporal Structuring

Beyond natural, social, psychological, biological, and physical time, individuals experience, use, and relate to time to make organizational choices and decide to follow a certain course of actions. Time understood as temporal structuring stresses the role of socio-temporal norms as structures or regularities (McGrath & Kelly, 1986; Zerubavel, 1982) that can be both objective and subjective and participate to frame the social interactions of individuals and organizations. Sahay (1997) emphasizes the significance of time (and space) to social construction by summarizing the advancement made by (Giddens, 1984, 1991; Harvey, 1989). According to Hassard (1996), temporal structuring is at the heart of organizations, and temporal factors should be of primary concern as human habits, organizations and group of organizations may coordinate, manage, or apprehend the use of time.

For a long time, researchers had been using temporal structuring, more or less systematically, without knowing it. The 'sociology of time' was used to label social time contingently to the context, speaking for instance of self-time, organizational time, interaction time, calendar/clock time that all like processes and structures interacted and are embedded in social systems. Then finally, Wanda J. Orlikowski & Yates (2002) gave birth to a formal theoretical background. Nowadays, both the objective and subjective perspectives are considered to come into play when examining the theory and practice of time as they succeeded to inculcate and convey the idea that temporal structuring is (one of) the fundamental perspectives behind which 'people enact a multiplicity and plurality of temporal structures, not all of which can be characterized in terms of the clock or deadlines' (Wanda J. Orlikowski & Yates, 2002, p. 698). Therefore, temporal structuring renders time as neither objective nor subjective, but as enacted periodically within organizations. They understood that exploring solely one metaphor of time confers just a snapshot providing inchoate information. To this extent, temporal structuring has been used to highlight the intertemporal tensions between event- and clock-time, opposing respectively cyclical work processes against schedules, deadlines, routines (D. G. Ancona, Okhuysen, et al., 2001; Bluedorn & Denhardt, 1988; Butler, 1995; Reinecke & Ansari, 2015). For instance, by accepting

the plurality of meanings of time, Bluedorn, (2002) shows that among the temporal dimensions of work, punctuality comprises clock-time and event-time perspective. Besides, other dimensions such as temporal depth can contingently hold either objective or subjective perspectives.

Temporal structures represent all the time-related frames of reference so that we have notion of time and that the notion of time is then equally dependent on the frame of reference. We can next put into motion other frames of reference (other temporal structures).

Drawing from the recursive nature of social life, temporal structuring emerged from the structuration theory where structures are a medium and outcome of social interactions (Giddens, 1984, 1991); itself influenced by Bourdieu (1977) and its principle of 'habitus' whereby this principle guides the course of actions but in turn is itself modified by them. Besides, Giddens already mentioned that time is a dimension of the structuration process. In the same vein, Weick (1977) illustrates through the enactment theory that when people act they bring structures and events into existence and then set them in action. Therefore, time is communicatively constituted by the interactions between the environment and its members. Considering the time structuring process was also one of the focuses of Adam (1994) who recognized the necessity to adopt (alternative) temporal lenses to study organizational phenomena. She highlights the ways in which time, a layered construct, is both embedded in and shapes our lives[2]. Again, without introducing the notion of temporal structuring, other scholars (D. G. Ancona, Okhuysen, et al., 2001; Blount & Janicik, 2001; Zaheer, Albert, & Zaheer, 1999) were concerned about the time structuring process and the layered nature of time.

Table 1. Selected Examples of Research on the Dimensions, Features, Layers or Structures of Time

Research	Concepts	Descriptions
Whipp, Adam, & Sabelis (2002)	The time layers of social entities	<u>Time layers</u> (unreflexive and reflexive) <u>Entities</u> (consciousness, interacting individual, organization)
Brown (2005)	The temporal landscape	<u>Functions:</u> containment, structural, bridging <u>Features:</u> duration; interval, pace, parallel, sequence, simultaneity, synchronicity, tempo, timing; past/present/future, beginning/ending, continuity/permanence, flux/change, passage/direction, pausing/interrupting, repeating
Berends & Antonacopoulou (2014)	Integrated model of Organizational	<u>Dimensions of time</u> (from the timescape perspective): (1) time as duration, (2) timing,

	Learning situated in time	(3) temporal modalities (the past, present, and future)
Schriber & Gutek (1987)	Temporal dimensions of organizational culture	<u>Time dimensions of work:</u> Time Boundaries Between Work and Nonwork, Sequencing of Tasks, Punctuality, Allocation, Awareness, Synchronization and Coordination, Variety versus Routine, Organizational Time Boundaries, Future Orientation, Schedules and Deadlines, Work Pace, Autonomy of Time Use, and Quality Versus Speed
(Ballard & Seibold (2003)	(Meso-level) model of organizational temporality	<u>Dimensions of temporal experiences:</u> enactment, construal <u>Temporal structures/interaction genre repertoires:</u> activity, coordination, workplace, technologies, feedback, cycles <u>System characteristics:</u> industry norms, occupational norms, organizational culture, workgroup norms
Rowell et al. (2016)	Integrated Framework for the Temporal Structures of Practice	<u>Types of temporal structures of practice:</u> Temporal patterns, Temporal orientations, Temporal conceptions
Adam (2008)	The timescape perspective	<u>Structural features:</u> Time frame, Temporality (how?), Timing (when?), Tempo (at what speed?), Duration (how long?), Sequence (in what order?), Temporal Modalities (when?)
Granqvist & Gustafsson (2016)	A Model of Temporal Institutional Work during institutional change	<u>Temporal activities</u> <u>Forms of temporal institutional work:</u> constructing urgency, entraining, enacting momentum <u>Outcome as shared temporal beliefs:</u> Windows of opportunity, Synchronicity, Irreversibility,
Grzymala-Busse (2011)	Aspects of temporality in the	<u>Duration:</u> temporal length of an event <u>Tempo:</u> Amount of change per unit of time

	analysis of causal mechanisms and processes	Acceleration: Derivative of velocity with respect to time Timing: Position on a temporal timeline
Moran (2015)	Time as social practice: functions of temporality	Duration: processual occurrence of heterogeneous reality Access: the possibility of encounter contextualized by a schedule, though not dependent on one. Inevitability: something that will come to pass
Kaufman, Lane, & Lindquist (1991)	A time congruity framework	Standardization: 'process of making adjustment in one's own preferred time style to fit with the time style of another person' (Kaufman et al., 1991 p.88) Type of time congruity: (1) Individual Ideal-Actual Match, (2) Work Time Congruity, (3) Organizational Time Congruity
J. D. Lewis & Weigert (1981)	A Paradigm for the Sociology of Time	Embeddedness: human life and the social actions which constitute it are a complex overlap of actions and meanings at various stages of enactment Stratification: experience of self-control and social control plausible as a single reality Synchronization: making the rationality of human action and planning plausible.
Blount & Janicik (2001)	Temporal structure of organization	Explicit schedules, sequencing patterns, and deadlines Implicit rhythms and cycles of behavior Organizational cultural norms about time

For instance, Rowell et al., (2016) successfully map the temporal structuring processes of practice by identifying three temporal structures: temporal patterns (positioning of practices in time), temporal conceptions (properties ascribed to time), and temporal orientations (how time is valued and attended to), to describe the significance of temporal structures in the reproduction of practice. Yet, they theorize how temporal structuring as process regulates human actions by serving as normative and cognitive guidelines restricting variations of practice.

Temporal structuring points up both the significance of the subjective interpretation of individuals and the social structures which mold such interpretations but also are composed by them. Adopting this perspective, a situation may shift from being a one-time event to being acknowledged as part of a whole process. This practice-based perspective of time

perceives time as a social construction as a result of interactions, i.e. constituted by human actions through temporal structures that are shaped and being shaped by organizational actor's practices (Wanda J. Orlikowski & Yates, 2002). It links time and practice as interrelated dualities.

Temporal Reflexivity: The Ability to Alter or Reinforce Temporal Structures
The temporal structuring theory suggests that time is one of the fundamental medium of social system and a key component to individuals, groups, and organizations. 'In a society characterized by constant flux and redefinition. One must continuously reinterpret its experience to match an ever-changing present' (Flaherty & Fine, 2001). Prior studies have emphasized that actors must be reflexive about temporal structures and their capacity to change them when seeking to change practices (Wanda J. Orlikowski & Yates, 2002; Reinecke & Ansari, 2015). To this extent, actors hold, acquire, and develop[3] temporal predispositions. The prime reflection is then that time is assimilated as a two-way shaping process but constrained between the substantial perceptions of individuals and organizations, and structured into the origination of society. This dual mechanism means that organizational time can be assessed both in terms of objective social variables (e.g., task distribution, working hours…) and subjective features (e.g. cultural components, time perception, behavioral patterns, and norms) (R. A. Roe, Waller, & Clegg, 2009). This 'surrogate for the environmental stimuli' (Johns, 2006) is a movement of downward and upward requiring to acquire comprehension of how temporal reflexivity occurs.

Linking time to reflexivity has been a common exercise among many organizational researchers (Antonacopoulou & Tsoukas, 2002; Steier, 1991; Weick, 2002; Woolgar, 1988) and its related temporal predispositions and experiences have been studied through multiples angles taking many forms that have been deciphered to express the ideas, people, organizations, processes and events that organizational researchers were interested in.

Table 2. Representations and Interpretations of Selected Reflexivity-Related Temporal Constructs[4]

Core representations	Interpretations
Temporal conceptions	Organizations and actors' experience of time that are influenced and influence the ways organizational participants map their activities (temporal enactment) and relate to time (temporal construal) (R. A. Roe et al., 2009). Conceptual assumptions of time that enable to be apprehended and acted upon (Rowell et al., 2016).
Temporal schemata	Individual's understanding and experience of time conducting individual's perceptions of time and the responses to temporal

	features. It draws its characteristics from temporal construal, temporal perceptions, temporal perspectives, and visions of time (O Riordan, Conboy, & Acton, 2012).
Temporal enactments	The way organizational members use time and include structural features of time (flexibility, linearity, precision, separation…) (Ballard & Seibold, 2003)
Temporal construals	The way organizational members interpret or situate themselves in time and embrace time-related concepts such as of time scarcity, urgency, orientation. 'temporal construals inform and are informed by intersubjective, subjective and objective times.' (R. A. Roe et al., 2009)
Temporal responsiveness	'The ability of organizational actors to adapt the timing of their activities to unanticipated events.' (Blount & Janicik, 2001)
Temporal embeddedness	'The mechanism making the experience of self-continuity, a permanent identity across differing situations, plausible it is a plausibility structure for the experience of the unity and continuity of an increasingly complex modern self.' (Hassard, 2016)
Time management competencies	Person' capacities for punctuality, procrastination, task distribution, time allocation, synchronization, and coordination… (Burt, Weststrate, Brown, & Champion, 2010)
Temporal experiences	Collection of impressions of the different time metaphors resulting from our experience of time (Friedman, 1990)
Temporal norms	Punctuality, temporal autonomy, and the time the boundary between work and non-work. (Schriber & Gutek, 1987)

Temporal structures are not sheltered as they are entwined with others, due to the human ability to reinforce and alter temporal structures, i.e. temporal reflexivity. Temporal structures are socially enacted temporal norms from individuals and organization's temporal reflexivity. Yet looking at temporal structures simply as temporal patterns used by actors to 'perform' time is to neglect the actors' and organizations' temporal abilities to 'act' upon the temporal settings that surround them. Specific business networks composed of organizations, groups, and individuals used their sensitivity to interpret they own environment (Flaherty & Fine, 2001). Organizational participants oscillate between action and reflection from the dynamic interplay of interactions where the significance of organizational temporalities is created at the junctions of time (see junctures of temporal reflexivity introduced below). Every conception of time is then called into play according to the actor's experience of time.

The social sciences literature tends to view reflexivity as the potential possibilities of shaping our lives and interact with our environment by creating new pathways. McPhee (2004) suggests that reflexivity leads the establishment of social systems. Nonetheless, this

reflexivity can be limited or guided by structures that over time become substantial scheme of action for social practices. Looking at reflexivity with a temporal lens is particularly relevant in the case of temporal structuring as Flaherty & Fine (2001) look back on Mead's view describing that 'the temporality of social interaction is structured by unwritten rules that ensure an appropriate sequence and the rhythmic dance of turn-taking' (p.157). Rules partially emerging from cultures and human experiences as they develop temporal predispositions in their perceptions, reactions, and use of time. Human interpretations and temporal structures both emerged from the inherent temporal reflexivity of individuals as people engage in temporal structuring by reflecting and questioning them. To understand time, one must put the temporal features of reflexivity as the central focus to capture the inherent interplay between action as means of reconstruction and as encompassed by other actors and social systems. But how temporal reflexivity comes to existence, and by which processes? The nature of actors' temporal reflexivity may give more details on complex problems to go beyond the narrowed qualitative and quantitative evaluation of timing issues and norms.

To neglect temporal reflexivity manifesting at different degree regarding the unique abilities of each actor is to overlook how actors act upon time. Whereas taking into account the layered temporal reflexivity allows us to decipher the way in which people in particular settings come to apprehend, account, take action, and manage organizational life. Clarifying the process by and for which temporal reflexivity is enacted would help to inform the ways in which actors relate to time as it gives to the recipient the ability to reflect (in itself) in time and go beyond the current temporal configurations. Drawing on our exploration, we can now proceed to introduce our research method which will unravel the process through which we performed our ethnographic study within and beyond our research context. We then shed light on the temporal complexity behind the process of temporal reflexivity through the introduction of its junctures demonstrating the layered nature of the two-way shaping process of temporal structuring.

Table 3. Glossary of Temporal Structuring

Term	Definition
Temporal reflexivity	'The ability of altering or reinforcing temporal structures' (Wanda J. Orlikowski & Yates, 2002)
Temporal structures	Multi-level time-driven patterns representing the time-related frame of reference with which actors interact to relate to time
Junctures	The processes by which temporal reflexivity is enacted to bring and raise awareness of time that, in turn, enable actors to reflect-in- and -on-action.

Methods
Research Context

Since the end of the 1990s, e-commerce boomed when the internet was opened to commercial use. At the same time, we have seen the emergence of pure players and some companies became rapidly famous. The population responded positively and now online shopping is one of the most frequent online activity. Our fieldwork took place in Europe over a 6-month period in one of the major e-commerce company. The study commenced in March 2017 and was situated in, according to a survey, the most productive country in the world. This study was conducted by one academic researcher, who worked for the company and had very limited access to data during this time. He served as a colleague, a source of knowledge, a manager, a researcher, an organizer of multiple events and workshops. This organization is one of the largest enterprise worldwide providing varieties of goods such as books, electronics, software, DVDs, video games, music CDs, MP3s, apparel, footwear, health products with over 300,000 employees that potentially provide meaningful and diverse research materials.

Due to the way the research was initiated, the population of this study was composed of product managers, site merchandisers, marketing managers, and vendor managers all members of one business retail team in charge of selling a specific type of products directly to the customer through the online marketplace. The business team concerned in this study was formed with the extension to a new variety of goods starting from 2014. Even though the length of the investigation and the limited resources, we were still able to draw meaningful conclusions and authenticate the so-called junctures of temporal reflexivity.

Table 4. List of Pseudonyms

Pseudonym	Description
DR	Director
HPM	Head of PM
SPM1	Senior Product Manager 1
PM1	Product Manager 1
PM2	Product Manager 2
MM1	Marketing Manager 1
MM2	Marketing Manager 2
FA	Financial Analyst
INT1	Intern 1
INT2	Intern 2
INT3	Intern 3

We adopted a pragmatic approach, as we wish to interpret time and its temporalities in action and how they interplay. Pragmatism is a way to approach social life by applying contingently the methods that seem to the best fit for the issue at stake. By embracing this philosophical stance, we wish to focus on the practical manifestations of ideas and thinking and avoid the early use of concepts that may result in premature theories constraints to our observations as it is a common biased of social researcher in organizations (Maanen, 1979). As time influences our interpretations of phenomena (Zaheer et al., 1999), ontological and epistemological considerations affect both the lens of the researcher and the conduct of organizational research. For instance, Kaplan & Orlikowski (2013) use a sensemaking approach (interpretive links in time) to look into the past to search for the rationality of organizational participants showing that future visions may cause the reconstruction of history (Weick, 1995). But temporal structuring combined with an interpretative approach seems suitable to examine how people experience, use and relate to time. As interpretive study focuses on 'the interplay of individual agency and social structure.' (Ybema, Yanow, Wels, & Kamsteeg, 2009), in our interpretive ethnography, we aim to understand phenomena through the meanings that people attribute to them (Myers, 1997) and how each member uses their temporal reflexivity and become aware of different temporalities. This may be done through the exploration of how organizational participants cope with temporal dimensions and structures and then establish and relate to them along their daily activities.

> *Time is neither an abstract entity nor is it a neutral medium, but a result of human engagement with the world. We cannot understand time by looking at it alone but rather by analyzing the ways people are involved in everyday life.* (Hörning, Ahrens, & Gerhard, 1999, p. 293)

A good starting point is to examine when people do what they do in practice and under which circumstances participants choose to enact different conceptions of time (Wanda J. Orlikowski & Yates, 2002). For instance, to apprehend the shared time-related rules (timing norms) at work we must 'think of all behavior, interaction, activity, and events as embedded within a paced, temporal context' (Ancona, Goodman, Lawrence, & Tushman 2001, p.651). An interpretative approach also analyzes how people subjectively act upon the phenomenon but also highlight the own researcher' reflexivity as he is implicated in the phenomena being studied (how the researcher experience and interpret those experiences). Gioia, Corley, & Fabbri, (2002) and Suddaby, Foster, & Quinn Trank, (2010) put forth in their separate studies that an interpretive view of time is well suited to better investigate organizational issues. Kaplan and Orlikowski (2013) contend that daily organizational participants' activities must become the object of study to put temporal work as a central element of practice. We attempt to understand people's perceptions, perspectives regarding the temporal features of organizational life. It was our decision to conduct an interpretive ethnography as it permitted to generate knowledge for further inquiries and contributed to our research by

focusing on explanation, and categorization, and sensemaking (Ybema et al., 2009). It also gave us the opportunity to acknowledge the specificities of the particular context of our study as an ethnography can be a description of a group (Goulding, 2005) through prolonged and direct participations within a specific context that focus on speech and actions that are always layered with meaning. These attributes make our interpretive ethnography suitable for depicting the tale of a retail team (event, situation, relation…) (Van Maanen, 2011).

Data Collection

How temporal structures are shaped, shape, but also perceived by organizational participants create the needs to study time in use (Wanda J. Orlikowski & Yates, 2002). Our direct and participant observations resulted in the productions of fields notes by a prolonged immersion in the life of the subjects. In this study, we observed, took notes, talked to people and everything was registered using a personal computer. We conducted participant observations to understand the perspective of those who are experiencing and engaging in their activities but also entering into dialogue with them to ensure that the interpretations of these phenomena were not solely the translation of our own experiences. Our observations aim to capture the social interactions and actions that constitute participant's daily lives and activities. This gives an unmediated access to the insider's world of meaning (J. Lewis & Ritchie, 2003) and our participation in activities enable to grasp what organizational participants do and how they do it. It gives a representation of persons, places, activities (Van Maanen, 2011). Both our observations and discussions were composed of daily work routines, meetings, lunch, even hallway conversations. We didn't guide discussions to elicit the collected data, nor did we hide the fact that we were collecting what was being said in case it turned out to be 'useful'.

  We made a judgment call and deliberate decision not to conduct formal interviews as it might be suboptimal in particular to recall complex events, experience or summarize aspects of behavior. Everything we try to understand is sieved through our personal experience and our own way of seeing the world. As researchers, we must always clarify people's meanings from their speech and actions, and we may get it (sometimes) completely wrong. Study the temporal complexity implies accepting that the data collected are more than ever 'nested' in social structures. Interviews would have more than ever affected the environment and the population and data could have been skewed towards practical subjects and the ongoing 'now'.

Table 5. Phases of Data Collection and Data Sources

Duration	Data sources
6 months	- Participants observation >80 meetings, 0.5-1 hour each - Work shadowing: 1 director - Direct contact: 32 different employees from diverse roles and positions

Data Analysis

As a follow-up to our pragmatic stance, we wanted to analyze our observations from the phenomena which are occurring in context by relying on abduction, a reasoning approach that is suitable when we begin with an insufficient set of observations and proceeds to the most plausible explanation. As a scientific research method, abduction is about using prior knowledge and field evidence to make conjectures and to stress them against observations and experimentation but also to rely on the researcher's 'instinct'[5]. To apprehend time in action and in its full complexity, this strategy of inquiries which assumes that the researcher is implicated in the phenomenon being studied, encourage us to focus on the detailed examination of individual lived experience and the ways in which they make sense of that experience, and how they interpret phenomena by looking at multiple perspectives with an insider's viewpoint. Studying these different interpretations and the processes by which they took form to allow us to make sense and give sense to the situations that they find themselves in (Dawson, 2014).

   The second stage was supported by a broad analysis to draw parallel and state hypothesis on how, beyond space and time, temporal reflexivity enacts the participants' thinking and action across multiple contexts. The four junctures presented in this study are what we interpreted as defining their relationships to time. We present the ethnographic findings in parallel to illustrate our typology.

Interpretive Ethnography in a Retail Team of an E-commerce Company

The typology below is formatted in a way that it permits to explore the temporal reflexivity. Temporal reflexivity creates one person's temporal reality, one person's complexity. The analysis is designed to highlight that the what we called junctures demonstrate the existence of temporal boundary points that self-reflexive individuals are able to exercise in their own disposition (Whipp et al., 2002). We give the meaning to junctures as the processes by which temporal reflexivity is enacted to bring and raise awareness of time that, in turn, enable actors to reflect-in- and -on-action. Considering both the notion of objective and subjective time are good reasons to suggest that time does not solely arise from an intersubjective

process (interaction between people) but also from the own actor's cognitive capacities to acknowledge any conceptions of time with or without regard to what time is actually brought into play. To draw a line between the objective and subjective perspective of time would mean that a certain conception of time is respectively a priori or a posteriori to our consideration of the practical effects of our own conception – conception subject to our conceived experience. As we consider that time is never merely subjective, intersubjective or objective as each one of them is shaped by the others, we stress the value of not restricting the study of time to merely one of these metaphors.

The data generated by informants indicated that temporal reflexivity possesses four underlying junctures. A mechanism assimilated as a (self-)time embedded in each individual. An action materialized by the necessity to interact and engage in various activities. A procedure by which time may be assimilated and molded, and finally, a projection of organizational temporalities and temporal embeddedness for potential possibilities. These four junctures come into play and lead to putting to use the individual's temporal reflexivity demonstrating the layered temporal complexity of organizational life. Each juncture can be affected and affect the others as they are simultaneously interrelated in knowledge, beliefs, goals, and intentions providing ultimately signification, legitimization, formalization, and domination of time across organizations.

Mapping the Temporal Reflexivity: Identify the Junctures

We labeled the junctures of temporal reflexivity as 'conceptual', 'behavioral', 'procedural' and 'structural' to decipher the meanings of temporal reflexivity and to theorize this typology fashioned and contextualized from the data collected. We found that these junctures highlighted that we simultaneously deal with various perspectives of time and that the actor's temporal reflexivity constitute and are also constituted by the multiplex overlap of meanings and actions. Broadly saying, the conceptual level means that we hark back to our perceptions, values, sentiments, and line of thought to set our own ideal time and temporalities. The behavioral level means that we take notice of time in practice, actions, and interactions. The procedural level indicates that we consider time in norms, rules, patterns, and procedures and that we then are also concerned by the way time is performed. Lastly, the structural level stipulates that we recognize that time is also embedded in structures and larger organizational settings.

Conceptual. As time itself can be seen to have no real quality or meaning (Navarro, Roe, & Artiles, 2015), all singular individual regardless of function, position or role, for reasoning purpose, must combine intentions and actions to relate to their reasoning and make sense of different conceptions of time. Thoughts and perceptions are when human open time to deliberation. Deliberating, according to actor's abilities, is to constantly reassess what is the apprehension of the situated time complexified by the temporal context itself.

One of the usual weekly team meetings of the product management team started with HPM introducing the topics of the week. As usual, 'I have not much to share this week' as he used to say. The discussion shifted rapidly to the work routines of everyone around the table. The regular consequence was that more or less half of the people in the room were focusing back on their own computer drained by their occupations, deadlines, and emails. HPM spoke about the Monthly Business Review commenting on how we could be more efficient in delivering the same level of information but by being more concise. 'What's the difference with the QBR (Quarterly Business review in terms of the information we have to share?' asserted MM2 as she was a newcomer in the team. SPM1 replied by explaining the broad outlines of what makes up an MBR. 'Let's put a blocker on the calendar for next Friday to have the first draft ready as it may need some correction' Asserted HPM.

Even without any further information, HPM figured that we might need some iteration to be sure we could pull off the intended result. How he assessed the situation was merely based on his ability to reflect on his own thoughts by both processing the information available and re-evaluating his perception of the time needed to perform the task. Maybe MM2's question made him recall that first, we were pretty all new to the team and that the department did not produce any MBR for the last three months. Perhaps alternative temporal linkages took shape between the generalized event of producing an MBR, his own perspective on how to get the work done and the situated necessities. This last comment revealed at least that human consciousness functions in a never-ending reproduction of ongoing 'nows' and reevaluation of possibilities in action, as time is inextricably bound up with human reflexivity (Schön, 1991). Even in the most common situation people discursively enact their conceptual juncture. As MM1 moved from her desk and looked at her colleague saying: 'Do you want to grab something before our meeting?' and without giving him any time to reply she declared: '... maybe there is a queue at noon as usual at the [lunch place], let's eat after our meeting'. As MM1 projected herself to imagine the possible future, she drew from past experiences that pushed her on a journey of apprehending the situation in another way 'Agentic processes can only be understood if they are linked intrinsically to the changing temporal orientations of situated actors.' (Emirbayer & Mische, 1998). This activity of evaluating time, again and again, is a matter of morality, ethics, values, obligations, critique, ideas, beliefs, knowledge, mind, imagination, and language. As Augustine (in Cassirer, 1957) wrote:

> 'It is in you, O my mind, that I measure time. . . What I measure is the impress produced in you by things as they pass and abiding in you when they have passed: and it is present. I do not measure the things themselves whose passage produced the impress; it is the impress that I measure when I measure time (p. 168)'.

This perpetual impress that we experience and 'measure' is due to our concern with what might come to be as we continuously link past, present and future by (re)interpretations of

the past and imagination of potential futures. The so-called past gives us reflection, the present gives us setting, and the future gives us expectations. The ways in which people undergo this process impact their perceptions of time and its passage. Everyone impresses time and measure its impress in a unique way. For instance, it is common that we have the bias to underestimate task-completion times as our expectation in terms of future outcomes affect our temporal perception and then our reasoning. In the early days following the incept of an idea to develop a product or service, the development team, who is located in India, must provide an estimation of the work to be done. For a specific change related to a database migration, they estimated that the migration required ten days of work. Stupefied by the estimate, FA claimed that even him without technical skills, he could do it in one day if only he had the adequate permission and some spare time. This was supported by the fact that he had really strong expectations for this project as he knew it was a critical data migration that could impact the whole department if it was not both performed in time and by following the guidelines from the IT department. '… but the dev team said ten days, you know…' said PM1. This other product manager had also expressed his astonishment when he learned that they needed that much time.

As demonstrated by FA's word, his vision of time was different as he set different expectations and then estimated differently how to achieve this specific task. They even went to question their honesty but, by taking a step back, we can simply imagine that this apparently excessive estimate emerged from the fact that we have the general tendency to overestimate the duration taken to achieve less familiar processes and tasks; and that the development team was not used to perform data migration. The above example resonates also with one of the dimensions of temporal enactment (Ballard & Seibold, 2003) that there is a degree of rigidity in time structuring and task completion plans; hence we all hold different time expectations. A newcomer (PM2) in the business team calmed down the situation, using his background as a developer to legitimate his remarks. He stated that in fact, this project would require maybe at least 6 days due to the dependencies with other features. Finally, as if nothing had happened, they all went back to their desk. This meets with the agreement that 'people can recognize that an event may be viewed, defined, or perceived in more than one manner, through several social focal points' (Wicklund, 1999 p.667). First, PM2 had the ability to appreciate several time perspectives while in reflection-in-action and managed to convey his idea to the rest of the team.

This same phenomenon is well-known from the company as they launched three years ago a process by which employees receive a daily question when they log in to their computer. It takes a few seconds to respond. Managers can access the aggregated response data. This experience was seen as an opportunity to provide real-time feedback about employee's experience. In August, one of the daily questions was: 'this time next year, I expect to…:' and we had to choose between four different answers representing approximatively all possible outcomes. From working for another company to being in another position in another department or same job, in the same team. We found something that intrigued us about this specific question. First, the relatively low response rate compared to usual one – more than three times higher than on another question. It is true that it could rely on the reluctance of people to share this type of sensitive

information about their personal plan; but it also ought to the fact that no one can see beyond a time they don't perceive the significance, explanation, or cause. All these examples reveal the existence of boundary cognitive settings that enable to operate on the basis of our own time conceptions. Temporal reflexivity through the conceptual juncture may be enacted due to endogenous processes. This juncture also highlights the potential capacity to rewrite temporal reality and create new temporalities. As organizational participants conceptualize and (re)define their temporal identity, it stresses the importance of the conceptual juncture in the process of temporal diachrony – changes (over time) in the attribution of meaning to time.

Behavioral. 'It is in practices that we experience time, and, thus, it is practices that make times' (Shove, Pantzar, & Watson, 2012, p.129). To grasp the full complexity of temporal reflexivity, we need to understand how we come to interact with temporal structures to make them not only a product of the environment but also the product of our course of actions, reflecting the critical significance of thoughts and therefore actions in time. Time enacted through practices is one of the emergent aspects of reflexivity that relies on actors performing and creating temporal linkages in action. Diverse interactions and potential confrontations of temporalities (e.g., interaction time) enable actors to transcend their temporal predispositions to exercise time and navigate among its conflicting conceptions. Personal skills, actions, and interactions typify the behavioral juncture of temporal reflexivity by the degree that they define the outcomes. 'Future does not come upon or over us, but we move towards the future.' (Atmanspacher & Ruhnau, 1997 p.180). It doesn't mean that the conceptual juncture doesn't interplay with the enactment of particular activities as each juncture are interrelated and dependent on each other on multiple levels. For instance, depending on which (type of) activity we are performing the impress will be slightly dissimilar.

Researcher & INT3 having a quick chat over a coffee in the kitchen:

> Researcher: How is everything?
> INT3: Don't ask, I don't even have time for me today. Meeting, meeting; and I'm blocked on this issue for [third party name] – I have been stuck at this […] excel file the entire morning. I feel like I'm really not productive.
> Researcher: […] did you have lunch?
> INT3: No, why?
> Researcher: […] you know it's already 2 pm.
> INT3: What?! Let me run to the [lunch place] across the street…

William Shakespeare wrote: "Time is very slow for those who wait; very fast for those who are scared; very long for those who lament; very short for those who celebrate; but for those who love, time is eternal.' As INT3 was stumped by this intractable and specific

problem and was running from meeting to meeting, he just lost track of what was happening and had simply no idea of what time it was. Besides, the tempo by which activities are dispensed will evolve simply because performing recurrently the same activity dramatically reduce the time needed to perform this specific activity. As an entity learns through its capacity of processing information the range of its potential behavior changed and then it broadens the potential possibilities of interactions with the environment by creating new pathways. Similarly, the same amount of time can be experienced differently across different activities (Bluedorn, 2002) and actors may interpret events within and between chosen periods. Another question from the daily survey was: 'time passes quickly when I am at work'. As we are not allowed to disclose the information, we may only convey that, in fact, for a majority of the respondents, time passes quickly and pleasantly at work. At the time they shared this results to the wider team, we could perceive the reaction when it was displayed. We had conducted our research already for four months and we exchanged profound conversations with at least five participants about job fulfillment. Topics such as 'What makes you feel motivated and satisfied in your career? Do you use your skills at work? Do you enjoy what you do? were commonly raised. As expected, much of the answers depended on the participant's mood and behavior, the work carried out over the last couple of weeks and the tasks at hand. Moreover, an isolated behavior may have enough authority to impact the current temporal settings or a simple dialogue between two managers on the next action-steps to tackle may affect one of the recipients of this speech as he reflects on thoughts, olden days and projections. 'You can spend all the time on diving deeper, and deeper, and deeper losing sight of the fact that not all decisions need to be analyzed to the n-th degree, starting to lack in the ability to make decisions quickly' argued DR, while he had a meeting in his office with the researcher. In this assertion, DR stressed the impact of spending too much time trying to get to the bottom of an issue and thus resulting in a loss of the ability to act quickly, which is a direct modification of the temporal capacities of one's person due to repeated actions.

   We have seen that the conceptual juncture is a source of temporal diachrony as we act as free individuals but actors may also by their action provoke new temporal setting and in groups they might create, for instance, intertemporal tensions (Reinecke & Ansari, 2015) as different enacted time metaphors may lead in organizations to temporal conflicts (Clark, 1985; Dubinskas, 1988). Actors and groups of individuals engage simultaneously with conflicting timing norms due to the reflection-in- and -on-action (Schön, 1991) occurring at a moment in time (an event, a process). Though, there is no assumption that we would be constantly aware of this reflection. When a person relates (accidentally or not) on this ability, conceptions of time that are time-dependent and historically connected are revisited and then impact activity (reflection-in-action) and, in turn, his behavior (reflection-on-action) might sway such conceptions. Actors engage in reaction and after reflection as they become aware of actions by looking backward and forwards on and in time. This is where the distinction between reflection-on-action and reflection-in-action (Schön 1991) can play its full role and emphasizes the interrelated nature of the temporal reflexivity.

As we engage in social practices, our impress of events and processes is defined as the number of footsteps to reach that particular point and then, obviously, from the deniable number of actions taken when we reach this exact locus. Temporal reflexivity enacted by independent actions and events is 'critical'. Actors engage with multiplex temporalities respectively to the way they experience phenomena in organizations. Though these accounts have shed light on the untamable nature of temporal reflexivity, individuals are also constrained when they (intentionally or not) disregard certain temporalities by paying very little to temporal natures of organizational activities. The individuals ignoring the temporal settings while generating thoughts and actions that take on time itself, do not relate to a priori or posteriori knowledge and induce temporal heterogeneity. As a result, temporal reflexivity in practice may have the purpose of altering or reinforcing existing time structuring processes or simply no purpose at all.

Procedural. 'The repeated use of certain temporal structures reproduces and reinforces their legitimacy and influence in organizational life' (Wanda J. Orlikowski & Yates, 2002 p.686). The potential of temporal reflexivity relies also on when a hybrid and routinized synthesis of multiple temporal features takes place. As time is shared across practices, the 'proceduralization' of time defines temporal principles indicating how actors must position themselves within a certain context given their temporal conceptions available to interpret the time-related processes and with respect to these former principles. Temporal principles that steer actors in their temporal thinking while influencing an intended behavior.

The procedural juncture act as a mechanism that enables to puzzle over temporal rhythms within one person's environment to make sense of powerful internal and external pacers. As people synchronize their activities to be more effective, individuals and groups generate temporal structures but this harmonization process is not homogenous, and groups of individuals develop different timing norms (perceptions emerging from different temporal reflexivity). 'Temporal structures are a nexus for interpretation and negotiation by different groups and serve to distinguish them from one another (Yakura, 2002)' (R. A. Roe, Waller, & Clegg, 2009 p. 212). Even though actors have the capacity to assimilate different temporal structures simultaneously, they can be affected in their ability to yield an intended result. First, to study the procedural junctures we must more than ever consider multiple temporalities and time metaphors but this exercise requires to accept that time and time-related constructs are concurrently independent and dependent components. 'It is important to look through multiple windows in order to choose the best window for the phenomena of interest' (Ballard, 2008 p. 213). For instance, Time as objective is experienced through external pacers, in the organizational environment, such as market forces that dictate product life cycles. Second, organizational temporalities as experienced by individuals and groups of individuals results from clock and event time that by their superposition create a collective belief and the consensual elements of time. Likewise, these components of time affect the conceptualization of formal socialization procedures (Ballard & Seibold, 2003). But the procedural juncture may be

activated only in definite time frames. D. Ancona & Chong (1996) distinguish between phase and tempo in their entrainment concept. Phase depicts the synchronization of cycles and tempo is assimilated to set the pace of activity. If we look close enough, we may realize that 'proceduralization' can be passed on from manager to employees so that they replicate the manager's temporal reflexivity, assimilating one of the dimensions of the procedural juncture as a socialization process (social integration perpetuated across space and time). But the procedural juncture of the individual' temporal reflexivity is subject to timing norms and to the socialization process, if there is no alignment over time between the different junctures of this individual with the time conceptions conveyed by the ascendant temporal settings that entrain actions (*zeitgeist*), temporal proceduralization may never occur. The relationships within the department have been strained and between DR and HPM it was just as bad if not worse from time to time. Once, they argued in front of everyone else. Problems developed when DR discovered that they were not aligned with the mid- and long-terms goals for the team. It turned out that, globally, there was a lack of communication. Besides, HPM was not good at planning ahead. He already admitted himself in front of his colleagues that he 'sucked at organizing'. Nonetheless, it was clear that this was not the only issue. As HPM said, 'sometimes DR & I, we don't have the same priority''. This essentially means that they had different time conceptions and expectations. Finally, it turned out they both learned and worked on themselves and it was striking that two months they had reconsidered their position and adjusted their view on what was the department's business strategy for the next quarters to come. Both of them were parts of the equations to make the entrainment feasible, but this also indicates that it may take time for people to adjust to new work paces.

In practice, actors within a particular time frame coordinate and align activities with the frame of reference that matches their temporal reflexivity. If you take the temporal structures that promote socialization of newcomers, you could see that it is completely contingent to their own individual's temporal reflexivity. This resonates also with Gomez (2009) that suggests that actors who are future-oriented engage in 'formal socialization structures' to socially assist newcomers. In our case, DR who was constantly inclined to share feedback and help to 'ramp up quickly' as he used today, was a rightful illustration of this concept. He has been found to possess 4 future-oriented and strategic themes out of 5. The company during our investigation had performed the Clifton StrengthsFinder. The Clifton StrengthsFinder is a web-based assessment of normal personality from the perspective of positive psychology. Specifically, the Clifton StrengthsFinder measures the presence of talents in 34 general areas referred to as 'themes.' The purpose of this assessment is to simply help people find the areas where they have the greatest potential to develop strengths. The potential but unstable possibility of temporal fit (time congruity[6]) is also well described by the study of temporary organizing as Bakker, DeFillippi, Schwab, & Sydow (2016) ask themselves: 'How can management reconcile the challenges of flexibility concerns for workers with the expectations of organizational members for more long-term

and predictable employment?' Time in the eye of the participants becomes temporal structures when it gains in intensity through proceduralization and socialization. This procedural mechanism is conveyed through norms and values shared by groups and people. Nonetheless, like any other process, it is moderated by the recipient's temporal reflexivity and pressured by the ongoing activity cycles that shape and are shaped by actors' day-to-day routines (Thompson, 1967; Tyre & Orlikowski, 1994).

Structural. 'Organizations are permanently operating in a temporalized world' (Whipp et al., 2002). As noted earlier in this paper, we assess that actors are constantly reevaluating what is their apprehension of the situated time but complexified by the temporal context itself. In reality, the temporal context means that all events and temporalities have specific purposive connotations in space and time. Blount & Janicik (2001) to define the concept of temporal expectations and preferences rely already on conceptualized notion such as temporal structures or predisposition (e.g., time urgency) and they approach closely that this expectations and references draw from both the cultural influence and the surrounding work context. Time emerging from social systems is taken for granted and that can't be different; and at whatever time and on whatever occasion, time is perceived as manufactured from the environment. Archer (1995) examines the temporal dimensions by looking at structures as after-effects of former agencies. But is time, temporal structures, and timing exist prior to actors' conception? Time passes into groups and individual from the societal and cultural levels. This indicates the conformity to which we have to or should be compliant with. However, this mechanism is not just a constraint but also an encouragement to action – the latter is a phenomenon many researchers have truly overlooked. Clock time influences our day-to-day life, but this patterned time necessary for organizational settings (McGrath and Rotchford, 1983) must have been construed by the individual's temporal reflexivity in ancient times.

   Regardless of the way in which we consider the emergence of a temporal macro-context and the organizational temporalities, this setting, established both by fact and as a matter of law, represents the set of temporal features that enables an actor to apprehend time as elaborated and bounded. For instance, skilled top management teams have been found to adopt work paces that coincide with the velocity of the related competitive environment (Eisenhardt, 1989). This elaboration of features is construed through multiple conceptions which make up the organizational temporalities and shape official relations and associations. The excerpt of the email below came from DR, who was about to discuss the employee's reaction to the company's values and behavior guidelines:

> [Company name]'s […] principles are structured in a way that it is intentionally very hard to score high on all of them simultaneously as that requires finding the contextually sensible balance…

Time is rationalized and projected as it is operationalized through different time metaphors but each of us through our structural juncture is able to consider and interact with these preconceived and olden temporal structures enlarged and swollen through the detailed social scheme. In the way that we would have to make sense of events in the light of some predefined organizational temporalities. Actors use the object of their conceptions in order to measure and represent the passage of time (impress). These temporal structures constrain actors' and then guide participants' behavior. The external structure of social times become the new norms of time. Everyone within the organization's boundaries may control the impact that external temporal structures may have on them. Our structural juncture of temporal reflexivity interacts with the temporal settings of social systems. In the temporal progression of embedded actions, we suspect that a substantial structural juncture would attribute greater significance to the temporal dimensions of authoritative structures and the actor would then be more influenced (in a way or another) in return.

   INT1 and INT2 did not see the value of holding weekly team meetings. As they were interns in the team with only two months to go, they lacked commitments and long-term perspective. Sometimes they were not attending, by making excuses such as: 'I have no time for this'. Sometimes they were present but not interested in what other people were doing or saying. They did not have an anchor with the team temporality and felt lost by the processes created with the purpose to better allocate time. The first consequence was that their time went largely unmanaged due to their own conceptions of how to spend 'their own valuable and precious time' and they did not want to give it away as they could see the 'finish line' approaching. They even felt pressure to comply with this obligation that resulting only in reinforcing their position.

As Hassard (2016) states, temporal embeddedness forces fully affect the definition and process of interaction in those instances where one or both persons have their temporal structures tightly embedded. By exercising their temporal reflexivity, actors develop their temporal skills that may bias and skew their line of thoughts towards a certain horizon. The structural juncture does not only magnify the influence of external pacers that forces to be in adequacy with the organization by translating timing norms into wider temporal settings that we ought to consider; but also contributes to originating the backdrop of other junctures. It resonates with the capacity of structural contexts to influence how actors in different periods and places see their worlds as more or less responsive to human purpose, and effort (Emirbayer & Mische, 1998).

   As you have realized, it has been difficult to perform the exercise of delineating the boundary conditions of each juncture as it needed in an unfair manner to abstract the interplay between them. For the sake of theory building of this temporal layout mechanism, that we have been more or less successfully to depict, we had to neglect in their description that they all simultaneously come to the actor's mind.

Discussion

Temporal features within organizations prevail both among the experience itself and the recipient of this experience. The junctures of temporal reflexivity are held and collected and then provides understanding about the temporal settings as well as feedback and feedforward on the individual perceptions. A juncture is underlying the conceptual elements demonstrating that organizational participants are knowledgeable actors who reflexively, in certain conditions, enact (explicitly or implicitly) new or modified temporal structures in their practices. (Wanda J. Orlikowski & Yates, 2002). It is the unique properties of these junctures that determine the points, beyond space and time, 'where' the time structuring process between individuals, groups of individuals and their environments may take place. It determines the input and output that enable temporal structures to shape and be shaped to the next points at which this temporal structure will itself be the input for the next to come, and itself generate an output.

As these junctures represent all the variants by which actors reflect on time, their significance on our explanandum of temporal reflexivity highlights that this typology must be dynamically integrated to capture the real-life time structuring process. Temporal reflexivity is inherent to human and takes its full sense in the processes of interaction. Nonetheless, it remains arduous to evaluate and estimate each individual's sensitivity to time or the influence of the relationships between the individuals and organizations. Temporal reflexivity ties together all junctures to perceive the temporal complexity by putting them into use. There is no order in temporal reflexivity, each juncture are interrelated and can influence each other, whichever comes first, in the actor' mind has the potential power to influence or to be subdued by the next one to come. Consequently, each unique individual holds temporal skills emerging from his (pre)fabricated time sensitivity shaped by his temporal reflexivity that when put into practice will constantly co-evolve with the environment. Temporal reflexivity reveals to be a means for conception, action, and projection. Temporal structures encompass actors that can both, by their everyday practices, alter the effects of the shaping process (educed from temporal reflexivity) and in turn be affected by them in their ongoing actions.

We have studied the temporal reflexivity through individuals, practices, interactions, and structures highlighting that temporal structuring results in putting into practice each conception of time that are 'integral to the experience of being human, as it is threaded through the practices that shape, and are shaped by our day-to-day actions (Hernes, Simpson, & Söderlund, 2013 p.3). Temporal structures are emergent and to fully understand the mutual shaping process we have aimed to deepen the degree of which we can describe and interpret their interactions with the surrounding environment and the people within it through the examination of temporal reflexivity. We observed in the daily existence of this business retail team how temporal structures took shape, how they were interpreted, how they were formulated and implemented in practice; how they evolved, and how they were ultimately being (re)shaped by organizational participants. In social life, temporal structures emerge, begin to be, and fluctuate over time. Some temporal structures are consistent through time,

others unsteady, even versatile. We found that temporal structures come into existence from the actors' temporal reflexivity and then play out in different ways at different scales and times. We showed how its junctures comprehensively describe the process by which temporal reflexivity proceed from. Therefore, these junctures shape the niche of temporal possibilities for the time structuring process. These junctures demonstrate that temporal reflexivity is constituted by interrelated variants that play a role to the certain degree relating to the individual's temporal sensitivity and capacities to reflect these junctures and create linkages with the layered temporal complexity. For instance, some actors may have the competencies to alter their relationships with some temporal structures by triggering their conceptual juncture. Others may at the same time adjust to several timing norms (Reinecke & Ansari, 2015; Slawinski & Bansal, 2015) triggering their procedural junctures. Operating their behavioral junctures, they might also accidentally or intentionally (by reflection-in-action) take action that results in generating intertemporal tensions. Temporal structures are not indefinite but only steady in the 'now'. Thus, existing conceptions can be altered and new ones can be introduced. Because temporal structures interpenetrate themselves and make sense only in light of each other, multiple and conflicting multi-level timing norms simultaneously steer activity cycles in different (temporal) orientations. Biesenthal et al., (2015) state that improvisation (that we assimilate as induced from the behavioral juncture) and synchronization (induced from the procedural juncture) play a critical role in temporal reflexivity as it demonstrates the arrangement of temporal features in project-related work. Many temporal structures may involve multiple junctures simultaneously or some may be bijective where other are not. They are many possible mappings between the junctures of temporal reflexivity and the temporal structures.

As time always coexists 'within a wider organizational and institutional setting' (Butler 1995, p. 936), actors by exercising their structural juncture might be anchored in the temporal configuration set up by a timekeeper, an event, or a process. In summary, temporal reflexivity is made up of four junctures. The principal result is that these junctures (conceptual, behavioral, procedural, and structural) delineate the temporal possibilities of meanings.

The interplay between organizational temporalities and the actor's temporal reflexivity resume the role that both play in eliciting the deepest mystery of all time(s). In this way, our research expands current understandings on how we conceive time. As we took into account that agency is in itself temporal and in exchange with the temporalities of its environments (Emirbayer & Mische, 1998), our reflection upon all of these temporal possibilities has been to grasp the vantage points of temporal structuring. Focusing on the inherent relationships between time and organizational participants enriches our understanding of its influence and impact on organizational life and this is crucial as it has a major influence upon our conceptions of what organizational life should look like, as well as how we research and theorize about organizational life.

Our interpretation may help organizational researchers to decipher how people in a specific context perceive and react to time-related phenomena. By identifying and

contextualizing temporal reflexivity in practice, as well as assessing the extent to which it is used across organizations, our layered typology provides a tool for such temporal complexity. Finally, actors were embedded within context and time, and exploring temporal reflexivity not only facilitated the theoretical development possibilities of time in organizational research but also demonstrated the value of using, more broadly, time-related concepts as an enhancement tool to deepen the knowledge of the temporal features of organizational life and processes. The reader may be frustrated and confused by absences of well-known temporal constructs or time-related concepts such as temporal depth, orientations, focus, polychronocity…. Nonetheless, the intent of our inquiry has been to distance ourselves from the conceptualizations of such concepts or temporal structures to suggest a typology that may serve as a guide for future research about time in organization studies, helping organizational researchers in their own investigation. To transfer this theory into practice, we encourage researchers to use this relative representation of temporal reflexivity in order to decode any time-related constructs. Taking the simplest concept of everyday organizational life such as the employee turnover or working time, and report how these common concepts may be illustrated through our typology.

To become more experienced with the phenomenon we were interested in, it seemed logical to perform a qualitative study allowing the direct experience of the constructs studied to apprehend how and why the phenomena occur, giving the opportunity to draw theoretical insights from other disciplines and to deepen our understanding into a particular phenomenon. Using unobtrusive measurement mitigated the risks and biases that may result from our presence, even if limiting our data collection to participant observations has inevitably reduced the level of which we had control over the type of data collected. With our fieldwork, we kept description separate from analysis while recognizing that these snapshots are just a glimpse of a point in time from a particular perspective, through a specific (temporal) lens. Nevertheless, through our informed exploration, we contributed to existing literature on social sciences as 'there is probably no more important category for cultural analysis than the study of how time is conceived and used in a group or organization' (Schein, 2010 p.134). Wanda J. Orlikowski & Yates (2002) transpose the concept of structuration answering the call for better comprehension of time across social sciences as 'social scientists have failed to construct their thinking around the modes in which social systems are constituted across time-space' (Giddens, 1984 p.110). By following this paradigm, we hope to have contributed both to the study of the time-related organizational phenomenon and the temporal structuring literature. More broadly, time-related concepts may benefit from time by putting as central focus their temporal dimensions (Navarro et al., 2015). Grzymala-Busse (2011) underlines how central the time dimension in theorizing and this is confirmed by Raab & Goodyear (1984, p.263) that state than 'when we … start to ask why the behaviors in question came into existence, changed, or remained stable, we approach meaningful theory-building'.

One of the limitations of this research is to understand how long these findings can remain consistent and meaningful. We must look at time as a 'boundary condition of theory' (Sonnentag 2012, p. 363) as it is related to the organizational context of the department in which the study took place. Moreover, the relative financial stress, due to demanding targets that the department was experiencing may have biased many outcomes of this research as people manifested a constant feeling of time urgency materializes by the common obsession with the scarcity of time. It has induced a persistent state of great turmoil that has locked the individuals under observation into a timeless wild activity – even though there were no logical reasons for it. It made it even more laborious to appraise personal goals, projective actions and to link intentions across interpretations of the past, present, and future. Besides, our ethnography alone can't interpret fully the social life of the studied group as the time spent in the field to theorize is a quality-defining element (Maanen, 1979). 'Fieldwork takes time. Does that make time the critical attribute of fieldwork? According to ethnographic tradition, the answer is yes.' (Wolcott, 1995 p. 77). Finally, the inherent reflexive nature of ethnography and the different and instinctive temporal lenses adopted to interpret each phenomenon observed resulted in obscuring some temporal organizational features and therefore may have affected what we were able to see.

With the following study, we wish to expand the awareness of the temporal dimensions of human perceptions by suggesting our multi-level typology that encourages to consider the significance of time across organizations. But answering at which expected organizational level would a specific temporal structuring process might emerge was not the aim of the study nor, to evaluate the pace by which they fade or endure as we just started to estimate how these interactions might occur.

For more practical considerations, we want to put the awareness on the temporal organizational design possibilities. Time processing mechanisms from the conceptual juncture to the structural one are encompassed in guiding rules and resources creating time constraints but contributing also to the dynamic temporal structuring of processes. For instance, drawing from an entrainment-based model (D. Ancona & Chong, 1996; D. Ancona & Waller, 2007; Pérez-Nordtvedt, Payne, Short, & Kedia, 2008), we should aim to determine organizational temporal fit, i.e. ideal temporal structuring of work, in order to enable organizational components to enact diverse conceptions of time but powerful enough to act as guidance temporal rules. Even if there is this need for coordination in time when it is seen as a scarce resource that must be managed (McGrath & Rotchford, 1983; Schriber & Gutek, 1987), organizers should focus on addressing temporal misfits systematically, rather than just leaving them (solely) to individuals. However, they have to take into account that controlling time is merely a possibility (Clark, 1985) as it relates both to the unique and shared experience of time (individual's temporal reflexivity). Although recent studies may suggest temporal design, there is no clear thinking on how temporal organizational design may help navigate through the organizational life that includes inherently temporal features at each level of the organizational and at each cycle of its phases. By identifying what kind of

time is involved and how temporal concepts can be apprehended to fine-tune our course of actions should be a meaningful source of information to enhance organizational life. A suitable approach would be to (1) estimate how time has been and can be defined in each concept under observations; (2) evaluate why and how these concepts inherited temporal features defining the when, where and for how long; and (3) precise to which junctures of temporal reflexivity it belongs to. Temporal structures even the most olden and long lasting one can be inextricably intertwined to multiple junctures (in time).

Time, as a finite resource, challenges the well-being of companies and not just individuals. The conceptual frameworks for organizing and managing in time are in short supply. There are few consequences when employees waste irreplaceable time drowning in the immensity of the overall organizational structure. Time is then often misspent and, on a day-to-day basis, we see both misleading and sometimes beneficial reactions on how organizational participants organize and manage in time. On a practical viewpoint, you may observe initiatives to see time as a scarce resource that brings as much (time) discipline as possible through time management best practices. In doing so, for instance, these organizations lowered overhead expenses, made executives more productive, and accelerated profitable growth. This study gives, to the limit of its logic, an opportunity for managers, and leaders to apprehend the significance that time bears when making decisions, when developing human resource strategies, designing organizational structures, defining bonus and incentives schemes or even launching and scheduling new products or marketing campaigns.

Conclusion

In this paper, with the aim of identifying the process of temporal reflexivity, we have observed how organizational participants in an e-commerce company recollect and experience organizational temporalities to realize that time and its passage remain largely open to each actors' temporal reflexivity. Following the temporal structures backward into its shapes and forward into its effects, we have uncovered the way by which temporalities come into play and how actors process an address time based on their inherent nature to both act upon and be affected by it.

We have looked at how people fine-tune their daily tasks to accommodate to their temporal constraints and we have noticed that an employee's behavior can exacerbate or attenuated these obstacles. Drawing from temporal structuring, we have studied how the temporal reflexivity takes place in practice. Time is partially about the course of actions in which the flow of time shapes the individual's temporal reflexivity but neither time is solely self-directing nor a structural autonomous mechanism. We operationalized our conception by using a typology depicting four interrelated junctures of temporal reflexivity: (1) conceptual, (2) behavioral, (3) procedural, and (4) structural that force us to state that organizational researchers, even by adopting the two-way shaping process of temporal structuring, have been biased by overemphasizing in research the influence of the temporal settings and overlooking the influence of our own temporal reflexivity in the development of time-

related constructs. When people act they bring temporal structures into existence and then set them in use and motion. Time is then expansively constituted by the processes between the environment and its members.

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    In *With one exception, the chapters in this volume originated as papers presented at a series of
    meetings known as' Discourse Analysis' workshops. The meetings were held at various institutions:
    University of York (15–16 Apr 1983 and 7–8 Apr 1986); Oxford Polytechnic (7–8 Sep 1983);
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1. Lead time represents the latency between the initiation and execution of a process.
2. (see the concept of 'timescape' introduced by Adam (1998) for a comprehensive
    description on how temporal concepts are disturbed across all the layers of an
    organization).
3. (Kaplan & Orlikowski, 2013 p.991) found out that more involved the skilled actors are

in temporal work – particularly in imagining alternative futures – the more 'degrees of freedom relative to the past' they can create, which may result in a change of taken-for-granted mental models.

4. Much more concepts are related to the study of time in various way such as, but not limited to Time urgency (Waller, Conte,Gibson, and Carpenter, 2001); Temporal orientation (Lawrence and Lorsch, 1967) (Rowell 2016), Temporal Depth (Bluedorn, 2002); Past, present, Future (Waller et al. 2001; Zimbardo and Boyd, 1999), Temporal panic, Interaction tempo (Warner, 1988), Polychronic v. Monochrinic (Hall, 1983; Barley, 1988), Time orientations (Jones, 1988), and pace (Levine, 1988). Temporal focus, Time horizon and its factors, 'Operations of fantasy' (Weick & Sutcliffe 2001) or Time stretching (Tsoukas & Hatch 2001).

5. This is only a mere description of the scientific approach that Peirce described, but it leads to the interpretive approach that we lean on to build our ethnography, even if we consulted conceptual literature before conducting the study in which the matter to be studied was discussed to get the idea about how we could proceed further. It suits an ethnographic methodology as it yields the kind of daily decisions that does its best with the information at hand, often incomplete.

6. See Time Congruity in the Organization: A Proposed Quality-of-Life Framework from Kaufman et al. (1991)