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# The interplay between organizational polychronicity, multitasking behaviors and organizational identification: A mixed-methods study in knowledge intensive organizations <sup>☆</sup>

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## ABSTRACT

This paper investigates how individual perceptions and attitudes about an organization influence multitasking behaviors in the workplace. While we know that individuals are significantly influenced in their behaviors by the characteristics of their organizations (e.g. ICTs, organizational structure, physical layout), we still do not know much about how the way individuals interpret their organization influences their multitasking behaviors. Thus, we specifically hypothesize that the individual perception of the organizational preferences for multitasking (i.e. organizational polychronicity) engenders the actual multitasking behaviors that an individual enacts in the workplace. We also hypothesize that the attachment to the organization (i.e. organizational identification) moderates the above relationship. We conducted a mixed method study in two knowledge intensive organizations (an R&D Unit and a University Department) and collected data through a survey, diaries, and semi-structured interviews. Our findings support the first hypothesis but not the moderating role of organizational identification. However, this latter is directly related to how much a person is willing to work on multiple activities on a single day. Further, our study suggests that not only the organizational context should be investigated in the study of multitasking behaviors, but also the larger work context, including the individuals' professional communities. We conclude with a discussion of theoretical and practical implications as well as methodological reflections on mixing methods in the study of multitasking in organizations.

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## 1. Introduction

The literature on multitasking and interruptions has significantly furthered our understanding on how individuals behave in multitasking environments (e.g. Salvucci and Taatgen, 2011) and react to interruptions (e.g. Grandhi and Jones, 2010; Trafton and Monk, 2007), on the antecedents of individual behaviors and management strategies (e.g. Mark et al., 2012), and on the consequences in terms of individual psychological states as well as group outcomes, such as individual overload (e.g. Wickens, 2008) or coordination (e.g. Perlow, 1999). However, a significant amount of this research, conducted in diversified fields such as human–computer interaction, computer-supported collaborative work, IS, and psychology has overlooked the role of the workplace context in the understanding of multitasking and interruptions and, in particular, has left us with a number of questions on how organizations influence their employees' multitasking behaviors. Among the notable exceptions we find the seminal

work by Perlow (1999) that shows how organizational norms regarding time use influence the organizational members interrupting behaviors, and the work by Dabbish et al. (2011) that shows how the organizational environment influences self-interruptions. The works in this line of research (see also Harr and Kaptelinin, 2007, 2012) started to uncover the role of organizational environments, but largely overlooked the importance that the individuals' perceptions of the organizational context have in conditioning the way they work.

Organizations and the perceived demands that they entail play a fundamental role in individuals' life and influence their behaviors because they desire to be evaluated positively and accepted by coworkers and organizational members at large (Blount and Leroy, 2007). Thus developing a more profound understanding of how individual multitasking behaviors are embedded in the interpretation of the organizational work context is of both theoretical and practical importance.

The aim of this paper is to explore how the individual interpretation of organizational context influences individual multitasking behaviors. Specifically, we will focus on how individuals perceive the organizational temporal norms and are attached to the organizations they work for. For organizations that face intensified competition and fast-paced environments, the management of temporal issues

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is of paramount importance (Ancona et al., 2001) and the way individuals perceive and experience time is central to groups and organizations' functioning (Schein, 1992). Among the temporal-related organizational variables, we argue that organizational polychronicity, or the individual members' perception of the organization's time use preference (Slocombe and Bluedorn, 1999), plays a prominent role in influencing how people deal with multiple tasks. At the group or organizational level of analysis, polychronicity has been conceptualized as a dimension of culture (Bluedorn et al., 1999; Hall, 1959; Schein, 1992; Souitaris and Maestro, 2010) and it reflects the preference for the involvement of individuals or groups in several tasks simultaneously as opposed to a preference for completing tasks sequentially that, conversely, characterizes a monochronic orientation. Thus, organizational polychronicity refers to perceived organizational preferences about the sequencing of activities and reflects how organizations prefer to allocate one of the most precious resource of their members, that is their work time (Souitaris and Maestro, 2010).

Building on research on multitasking (e.g. Salvucci and Taatgen, 2011; Trafton and Monk, 2007) and time and polychronicity (e.g. Bluedorn et al., 1999; Hall, 1959, 1983), we argue that individuals who perceive their organization as more polychronic will engage in more multitasking behaviors. Also, building on Social Identity and organizational identification theories (e.g. Ashforth and Mael, 1989; Dutton et al., 1994) we propose that the strength of organizational identification will positively moderate the above relationship. Individuals highly identified with their organization see the organization's attributes as self-defining and are deemed to be more willing than their low identified counterparts to promote the organizational values and norms and engage in subsequent identity-congruent behaviors. Highly identified individuals who see their organization as highly polychronic should thus try harder to engage in multitasking behaviors.

We investigate the relationship between perceived organizational polychronicity, multitasking behaviors, and organizational identification in two knowledge-intensive organizations that are devoted to research and development: an engineering university department and the R&D Unit of an organization that operates in the alternative energy industry. To collect our data we adopted a mixed-methods research approach. In particular, we collected data through a structured survey, the recording of diary data and qualitative semi-structured interviews. The variety of methods allowed us not only to test our hypotheses but also to develop a more nuanced understanding of how individuals made sense of what they believed their organizations asked from them and how they dealt with multiple tasks.

## 2. Theoretical background and hypotheses development

### 2.1. Multitasking in organizations

Knowledge intensive organizations, such as research and development units, software houses, or university departments, increasingly ask their employees to work on multiple activities, projects, and tasks in one single day or in shorter periods of time (Bertolotti et al., 2015; Bluedorn, 2002; O'Leary et al., 2012). In addition, knowledge workers are now intensively using collaborative technology (e.g. email, IM) that, on the one hand, enhances the possibility of being in multiple teams and projects simultaneously, while, on the other hand, increases the interruptions one generates and receives (e.g. Bertolotti et al., 2015; Li et al., 2011). The described scenario is characterized by a high level of multitasking a single individual deals with in his or her work.

In order to set the stage for our study, it is important to clarify how previous studies define multitasking and the specific position that we take in our research. Multitasking generically refers to situations

where individuals are asked to shift their attention between several independent, but concurrent, tasks (Adler and Benbunan-Fich, 2012). This definition, which is quite broad, encompasses situations where an individual is simultaneously doing more than one task (e.g. a subject of an experiment who is asked to drive and text at the same time) and situations where a person moves back and forth between tasks before completing them (e.g. a consultant working on different projects during a day). According to Salvucci and Taatgen (2011) and Gould et al. (2012), it is possible to integrate these different instances of multitasking and, as a consequence, the different disciplinary approaches that investigate it. For doing so, Salvucci and Taatgen (2011) propose the definition of multitasking behaviors on three continua: the multitasking continuum, the application continuum, and the abstraction continuum. According to these authors, on the two extremes of the multitasking continuum we find *concurrent multitasking*, i.e. individuals switching tasks at sub-second intervals up to few seconds, and *sequential multitasking*, i.e. individuals switching tasks after lengthy periods of execution. On the two extremes of the application continuum, we find studies that investigate real world tasks and studies that designed laboratory tasks. Finally, the abstraction continuum defines the granularity of the time scale under study and distinguishes between biological band (milliseconds), cognitive band (seconds), rational band (minutes), and social band (days/weeks/months). According to the 'band' of the study, researchers have been interested in issues of multitasking related to: eye movement (biological band, e.g. Cane et al., 2012), switching between different applications on a smartphone (cognitive band, e.g. Möller et al., 2013), moving between different work tasks (rational band, e.g. Perlow, 1999), and keeping in touch with family and friends (social band, e.g. Baym et al., 2004).

Given our interest in how perceptions of the organization influence how individuals move between different tasks in the workplace, the focus on our study will be on sequential multitasking and we will position ourselves on the applied continuum and rational band<sup>1</sup>.

### 2.2. Multitasking and organizations

The studies that specifically investigated the interplay between the organizational context and multitasking behaviors are still limited; consistently, Harr and Kaptelinin (2007) suggest that research would greatly benefit from the inclusion, in extant models, of collective and organizational factors. Table 1 summarizes our literature review on the topic.

Some studies, especially in the organizational behavior and management fields looked at the consequences of multitasking behaviors and interruption management strategies for employees, work groups and organizations (e.g. Perlow, 1999; Wickens, 2008). For instance, in his ethnography on 45 engineers, Perlow found that individuals experienced a constant pressure to respond to crises and a short-time oriented approach to problem solving. They enacted a pattern of constant interruptions that amplified multitasking behaviors and hampered coordination, with negative implications for the overall organizational performance. The works of O'Leary et al. (2009) and Mortensen et al. (2007) reinforce Perlow's argument by describing how coordination is impaired in organizational contexts characterized by high levels of multitasking where individuals work on multiple teams and projects simultaneously. Other studies underlined that extreme multitasking behavior is associated with delayed completion of tasks, higher frequency of errors, lower ability to think creatively, and worse decision making (Appelbaum et al., 2008; Gendreau, 2007).

<sup>1</sup> By focusing on sequential multitasking and the rational band we do not intend to underestimate the interplay between concurrent multitasking, analyzed at different levels of granularity, and organizational variables. We leave this other topic to future research, as we detail in our discussion.

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