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WHO WE ARE IS WHAT WE BREW: AN INVESTIGATION OF THE
RELATIONSHIP BETWEEN SHARED ORGANIZATIONAL IDENTITY BELIEFS
AND PERCEPTIONS OF COORDINATION AND COMMUNICATION IN A
CANADIAN MICROBREWERY

Marco Morelli

A Thesis

In

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ABSTRACT

Who We Are Is What We Brew: An Investigation of the Relationship between Shared Organizational Identity Beliefs and Perceptions of Coordination and Communication in a Canadian Microbrewery

Marco Morelli

This case study offers an in-depth investigation of the organizational identity construct (Albert and Whetten, 1985) from a shared mental model perspective. Specifically, the study explored the links between shared identity and members' coordination and communication behaviors in a microbrewery. Using six semi-structured interviews, five dimensions defining the character of the studied organization were elicited: quality producer, influence of the founder, involvement in the local community and social events, geographic attachment, and family/team.

Building upon those findings, quantitative survey data were obtained from 35 organizational members in different departments to test the relationships at the dyadic level between shared perceived organizational identity and perceptions of coordination and communication behaviors. Departmental affiliation was also tested for moderating effects. The findings suggest some evidence of associations between members' agreement in dyads about organizational identity and their perceptions of group processes. The moderating role of departmental membership was not supported. Theoretical and practical implications of the study's results are discussed. Recommendations for future research are also proposed in light of the study's limitations.

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1. INTRODUCTION

This study examines members' perceptions of organizational identity and will attempt to answer the question of whether or not positive relationships exist between shared organizational identity perceptions on the one hand and (1) members' task coordination, and (2) quality of communication at a perceptual level on the other.

The development and dynamics of collective identities represent one of the most challenging sources of interest for organizational theory scholars. Questions approaching organizational identity are important because today organizations are increasingly confronted with simultaneous pressures for institutional isomorphism and distinctiveness to position themselves in the social environment (Deephouse and Carter, 2005). In many situations, members of organizations turn to what they feel and perceive as their collective identity to find answers to these dilemmas. Organizational identity is a complex phenomenon that helps members make sense of their surroundings and represent a basis for collective action.

The extent to which people working together in the same organization share a collective understanding about their organization's identity has important implications for members' behaviors in the workplace. Kogut and Zander (1996) have argued that shared identity can improve explicit and implicit coordination and lower the costs of communication while Foreman and Whetten (2002) have shown that identity perceptions can affect positively the development of organizational commitment.

In this thesis, I have treated the notion of organizational identity as a form of shared cognition by the members of an organization and have empirically tested its impact on two forms of group processes: coordination and communication. From a theoretical perspective, organizational identity is a collective level construct that is shared perceptually among members, and thereby can be studied at multiple levels: dyads, groups, organizations, or industries. This research has adopted the dyad as the focal unit of analysis because it represents the most basic level at which organizational identity as a shared construct can be examined empirically. In particular, it was expected that the degree of similarity and agreement of members, at a dyadic level, about the attributes defining organizational identity would be associated with their perceptions of task coordination as well as the overall quality of communication. Membership in the same department or not was also expected to moderate these hypothesized associations.

This research makes several contributions not only to organizational identity theory by expanding knowledge regarding the impact it has on members' attitudes and behaviors in the workplace, but the results and recommendations from this study can also benefit practitioners by helping them to focus on important organizational identity-related issues.

1.1 Research Problem and Purpose of the Thesis

The notion of organizational identity refers to the way people feel and think about their organizations. It consists of those attributes that are central, enduring, and distinctive in defining the character of a firm (Albert and Whetten, 1985). The definition

of organizational identity is also often associated to members' shared answer to the question 'who are we as an organization?'

Pratt and his colleagues (Pratt and Rafaeli, 1997; Pratt and Foreman, 2000) believed that issues in members' interpretation of organizational identity are important for key organizational outcomes. For example, Pratt and Foreman (2000) believed that competing mental maps about an organization's identity can impede strategic decision-making and implementation. Further advancements have demonstrated that issues related to organizational identity can also transcend in members' knowledge and practice during routine activities on the job thus affecting members' task coordination (Nag, Corley, and Gioia, 2007). In a case study, Corley and Gioia (2004) have shown how identity ambiguity among organizational members can create difficulty in both internal and external communication with different stakeholders. Thus, evidence suggests that organizational members' coordination and communication behaviors may be related to their identity beliefs, and a motivating premise of this thesis is that further exploration to understand these important aspects of organizational life is desirable. To do so, the current research will turn to the shared cognition branch of organizational studies.

When reviewing research on effective teams and groups, Klimoski and Mohammed (1994) believed that members who share knowledge about task, teammates, and attitudes/beliefs can reach superior performance. According to Cannon-Bowers and Salas (2001), members have better coordination and communication because shared knowledge 'enables them to interpret cues in a similar manner, make compatible decisions, and take appropriate action' (p. 196). In their conceptual review of the shared cognition literature, Cannon-Bowers and Salas acknowledged that members who share similar beliefs about

their environment are capable of compatible interpretations of issues which in turn lead them to better work-related decisions. They also expected shared cognition to affect positively outcomes such as more efficient communication, similar interpretations, and better coordination.

In this thesis, I have attempted to integrate the two streams of organizational research by investigating if shared beliefs about organizational identity are positively related to members' perceptions of coordination and communication. The above mentioned relationships have not been explored so far in organizational studies and will constitute an expansion of knowledge in the organizational identity literature.

1.2 Research Question, Design, and Conceptual Framework

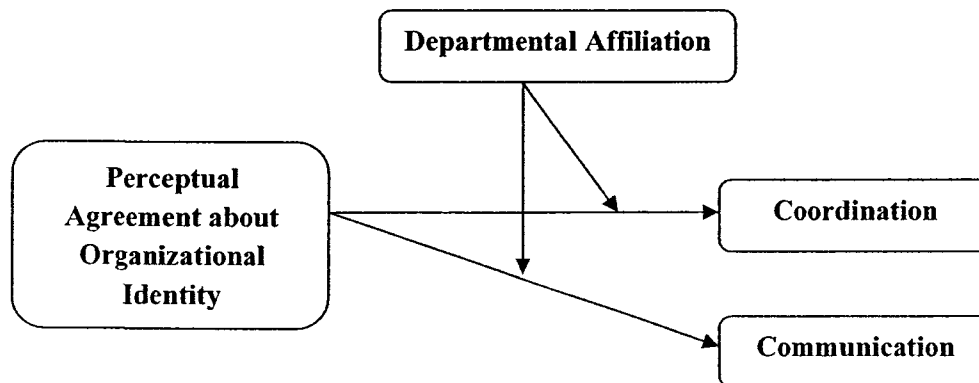
This case study was designed to explore the shared understanding of members working in one particular firm about their organization's identity and analyze how their perceptions of organizational identity relate to their perceived level of coordination and communication. The *case study* research design was adopted because the inquiry pursued in this thesis requires 'an extensive and in-depth description of some social phenomenon' (Yin, 2009: 4).

Therefore, the first goal of this thesis was to explore the collective understanding that members of one particular organization operating in the beer brewing industry in Canada have developed about what is the identity of their organization or, in other terms, about 'who they are as an organization'. Qualitative research methods were used to accomplish this objective. A set of structured interviews with key informants was used to

elicit the identity dimensions expressing the character of the studied organization. The findings obtained in this phase were then used to create a survey and collect quantitative data for testing the proposed relationships. The detailed information about the research methods used in this study is described in Chapter 3. But for the reader to gain from the beginning a visual understanding of our arguments, I provide in the initial section of this thesis the conceptual framework at the center of this research project in Figure 1.

Figure 1

Conceptual framework



The central hypotheses exposed in our framework are that the more organizational members see and understand organizational identity in a similar way the more they are likely to have similar perceptions of favorable (a) task coordination, and (b) organizational communication. The graphic representation also shows the hypothesized moderating role of departmental affiliation (i.e. membership in the same department or not) between the model's independent and dependent variables. It is important to note

that this study does not represent an attempt to prove the existence of causal relations between the constructs of the framework but instead proposes to test and investigate the presence of associations between shared organizational identity beliefs and group processes.

1.3 Organization of the Thesis

This manuscript is divided into six chapters. Chapter 1 provides a general overview of this thesis. It includes the statement of the research problem and question, and the presentation of the conceptual framework. This chapter also gives background information and introduces the reader to the domain of organizational identity research.

Chapter 2 reviews the relevant literature in order to anchor the study in solid theoretical foundations. The areas of research contributing to this purpose relate to the definition and social dynamics of organizational identity and the study of shared knowledge structures. In particular, transactive memory systems and shared mental models are used as parallels to justify the links between the studied variables and their importance to the study of organizational identity. I conclude the chapter by stating and explaining the hypotheses of this thesis.

Chapter 3 provides information about the research methods, composing a mix of qualitative and quantitative techniques. The chapter includes also an extensive description of the context of the study.

Chapter 4 presents the analysis results of the quantitative data used to test the hypotheses.

Chapter 5 discusses the results and highlights the strengths and weaknesses of our study as well as its practical implications and suggestions for future research.

Chapter 6 offers brief concluding remarks on this thesis.

2. LITERATURE REVIEW

This literature review is structured around three themes. Firstly, it examines previous contributions in the (2.1) organizational identity and (2.2) shared cognition literature. I present the original definition of the organizational identity construct and its evolution in organizational research. I then introduce shared knowledge structures as heuristics that allow understanding organizational identity from a shared cognition perspective. Specifically, research on shared mental models and transactive memory systems are reviewed.

The third and final section of the chapter explains from a theoretical standpoint the (2.3) level of analysis that was adopted, and introduces the specific hypotheses that are tested in this study. The data of this research are collected at an individual perceptual level in reference to group-related structures. Explorations are made at the dyadic level of analysis and departmental membership was tested as a potential moderating construct.

2.1 Organizational Identity

The concept of identity has widely been explored historically in sociology and psychology before being applied only recently to organizations. This is why the study of organizational identity is characterized by the presence of a rich and diverse theoretical background that has led researchers to adopt views coming from the social identity literature, social constructionism, symbolic interactionism, neo-institutionalism, and other theoretical perspectives. For example, symbolic interactionism in sociology (Mead, 1934;

Goffman, 1959) and social identity theory in psychology (Tajfel and Turner, 1979) have given a theoretical basis to organizational identity scholars for understanding and exploring how dynamics of identity exist by arguing that individuals assign themselves socially constructed meanings through interpersonal and symbolic interactions and through comparison processes with other entities in their interpretation of the surrounding reality.

Research has advanced the role played by socio-contextual factors in the creation of identity and fostered the application of the notion of social identity at the organizational level (Hatch and Schultz, 2004). These pioneer contributions were among the first to articulate a definition of identity applicable to a social domain and were essential contributions to the evolution of identity at an organizational level and its development along different lines of thought in more recent years. The purpose of this literature review is not to trace the origins of organizational identity but to outline the relevant contributions for the current thesis, departing from the original formulation of the organizational identity construct where appropriate.

2.1.1 Original definition and evolution

In organizational studies, the notion of identity is a relatively young concept and research on this topic has seen a predominance of theoretical contributions. Most of the work in this field has explored and investigated the original definition provided by Albert and Whetten (1985). These authors proposed that when looking at the ontological

question ‘who are we as an organization?’ an answer can be found in the central, enduring, and distinctive attributes describing the character of an organization.

Organizational identity becomes apparent when members are confronted with questions such as ‘who are we as an organization?’ or ‘what business are we in?’ Albert and Whetten (1985) first argued that such traits should be attributes that are core, distinctive and enduring to the organization. More specifically, in the words of these authors, a statement expresses the identity of an organization when it satisfies the following criteria (p. 265):

1. “The answer points to features that are somehow seen as the essence of the organization (*criterion of claimed central character*).
2. The answer points to features that distinguish the organization from others with which it may be compared (*criterion of claimed distinctiveness*).
3. The answer points to features that exhibit some degree of sameness or continuity over time (*criterion of claimed temporal continuity*).”

The definition presented in this seminal work has generated growing contributions to the development of the organizational identity field. Especially in the last decade, we have seen an increasing number of scholarly articles, books (e.g. Lerpold, Ravasi, van Rekom and Soenen, 2007; Whetten and Godfrey, 1998), and even a special topic forum of the Academy of Management Review (January 2000). At this stage of theory development, it appears clearly that organizational identity is more than a simple

metaphor, but rather an established construct that has the capacity to enhance both theoretical and practical understanding of organizational life (Haslam, Postmes and Ellemers, 2003). Recent debates in the literature, however, have evidenced how the conceptualization of identity at the organizational level is still a developing reality (Corley, Harquail, Pratt, Glynn, Fiol and Hatch, 2006) and how the Albert and Whetten definition has been the target of certain critiques (Gioia and Thomas. 1996; Gioia, 1998). In particular, the enduring character contained in the original definition has been the object of contentions because of an environment characterized by continuous change and innovation. The distinctiveness aspect of an organization's identity has also been questioned with the argument that many organizations nowadays appear to be purposely similar one to another.

On one hand, plural approaches towards organizational identity have produced major developments advancing knowledge in the field under different perspectives and uncovering multiple facets of the phenomenon. On the other hand, this area of organizational research is confronted by a certain 'identity confusion', in the sense that clear guidelines on how to operationalize, assess and measure identity at the organizational level do not exist and there is a lack of consensus on a unanimous definition of organizational identity (Corley et al., 2006). Therefore, in studying organizational identity, researchers need to state explicitly how they conceptualize and approach this notion in their work (Nag, Corley, and Gioia, 2007). Despite all the critiques and debates originating from the Albert and Whetten work, their definition is still the basis of research for many scholars in the field and therefore will be considered as the main conceptual guideline for this thesis.

Organizational identity studies have predominantly consisted of theory building exercises compared to empirical applications. Because the field is still young, empirical scholars have primarily focused on case studies and qualitative research designs (Glynn, 2000; Nag, Corley, and Gioia, 2007; Ravasi & Schultz, 2006) to establish and reinforce theory, to enhance the understanding of this organizational phenomenon, and to portray a conception of identity that can be clearly distinguished from related concepts such as image, reputation, and culture (Hatch & Schultz, 2002; Whetten & Mackey, 2002). In the same line, the current research offers an examination of organizational identity in one particular organization and studies its empirical association with specific organizational behaviors.

By extending the study of identity from the individual level to the organizational level, researchers have shared the intent to understand ‘how individuals in organizations perceive and categorize themselves as members of a group, an organization, or a larger encompassing community’ (Ravasi & van Rekom, 2003: 119). Organizational identity is a concept centered on the self-view of an organization about the elements that are ‘central, enduring, distinctive’ about it. This broad range of theoretical diversity is mostly due to the fact that the construct acts as a bridge between micro and macro levels ranging from perception and experience at the individual level to implications for the organization as a whole and its community. Identity at the organizational level is about capturing ‘that which provides a self-referential meaning where the self is the collective’ (Corley et al., 2006). However, the interpretations of scholars have evolved along two main perspectives and theoretical approaches about such self-referential meaning. These two

lines of thoughts are labeled *social actor* and *social constructionist* views of organizational identity.

At this point, I have provided a general understanding of the original definition of organizational identity adopted in this study and traced the evolution of this concept in the literature outlining some of the debates and criticisms that surround it. I will now explore in details the different implications that organizational identity as a social actor and as social constructionist has for the present research.

2.1.2 A social actor view of organizational identity

The view of organizational identity as a social actor finds its roots in institutional theory (Ravasi and Schultz, 2006). Some scholars refer to organizational identity as the attempt of an organization to position itself in the external environment and seek for legitimization by communicating formal claims and messages that define its character (Czarniawska, 1997; Whetten and Mackey, 2002). According to Whetten (2006), the set of claims about the central, enduring, and distinctive attributes characterizes the nature of an organization and delineates a unique social space generating legitimacy in institutionalized environments. This quest for distinctiveness in an institutionalized context is operated through processes of social comparisons with other entities. This is evident in the words of Whetten and Mackey (2002) when they state that organizational identity as a *social actor* 'is appropriately conceived as a set of categorical identity claims in reference to a specified set of institutionally standardized social categories' (p. 397).

According to Ravasi and Schultz (2006), this view tends to put an emphasis on the sensegiving function of organizational identity. This happens because the unique set of claims in the social space of the institutional environment defining organizational identity act as a guide for members ‘that allows them to construct a collective sense of self’ (p.435). Therefore, studies adopting a social actor perspective have mainly observed how formal narrative, official communications, and external stimuli influence members’ identity claims about an organization.

2.1.3 A social constructionist view of organizational identity

On the other hand, from a ‘*social constructionist*’ view, the organizational identity phenomenon is interpreted through members’ shared understandings about their organization’s identity (Corley, 2004; Corley and Gioia, 2004) where identity is treated as something that resides mostly in the minds of organizational members (Nag, Corley, and Gioia, 2007). This different approach focuses on organizational identity as collective understandings or as the set of shared cognitive structures of organizational members about the self-referential meaning of an organization. A socially constructed organizational identity acts for its members as a lens or perceptual frame that helps interpret their environment and make sense of it (Corley et al., 2006; Gioia, Schultz & Corley, 2000).

According to Ravasi and Schultz (2006), the social constructionist approach thus emphasizes the sensemaking aspect of organizational identity. These authors have stated that scholars adopting this line of thought tend to observe how members create shared

understandings about the character of their organization and how such shared beliefs affect organizational outcomes.

To summarize, organizational identity has been conceptualized in the literature as a self-referential meaning that can be explicit or tacit (Corley & Gioia, 2004), manifest under the form of place and discourse (Brown & Humphreys, 2006), and present in knowledge and practice (Nag et al., 2007). But identity affects and is affected also by the institutional context in which the organization is embedded through categorization processes of differentiation and assimilation with other organizations (Whetten & Mackey, 2002) and refers to the collective understanding of the socially constructed features characterizing an organization (Gioia et al., 2000). Whetten and Mackey (2002) argued that the distinction between identity as shared perceptions among members and identity as institutional claims available to members are two competing conceptions of organizational identity. But identity is shaped by both external environmental factors and by internal factors (Dhalla, 2007) such as the internal cognitive processes resulting from organizational members' social interactions. In the same vein as Ravasi and Schultz (2006), I believe that these two approaches do not necessarily compete with one another, but represent two aspects of the same organizational identity phenomenon and are complementary. These scholars further argued that a combination of these two perspectives is needed and should be taken into account for a complete understanding of organizational identity because together 'the social actor and social constructionist views suggest how organizational identities arise from sensemaking and sensegiving processes' (Ravasi & Schultz, 2006: 436).

From these general understandings of organizational identity, I will now explore how previous studies have implicitly acknowledged how this notion can have important implications for organizational members' coordination and communication behaviors.

2.1.4 Organizational identity, communication, and coordination

The relationships that I have proposed to study in this research have not so far been considered by the literature. Organizational identity perceptions and the implications for organizational and group processes, such as communication and coordination, are an under-researched topic in organizational studies. However, previous contributions contain implicit references and evidence key findings that point to the research problem addressed in this thesis.

For example, Pratt and Rafaeli (1997) have unveiled the existence of conflicting organizational identity conceptualizations among a group of hospital workers through the study of organizational dress. In their study, they observed that disagreement about identity sometimes led to conflicts and interpretation issues among workers, which affected the development and coordination of their daily activities. Similar findings can be found in the work of Corley and Gioia (2004). Their case study of a corporate spin-off features evidence that discrepancies about organizational identity perceptions among members may lead to difficulties in communication, as suggested directly by one informant in the study: "we've been able to do a lot less employee communication than we normally would have, which has been frustrating to employees" (p.192).

Nag and colleagues (2007) have directly examined the relationship between organizational knowledge, practice, and identity. In their case study, the lack of identity agreement between scientists and business executives led them to experience difficulty to work with each other because they had conflicting views of 'who they were as an organization' and what were the goals of the organization.

The findings discussed above support our research intent and are derived mostly from studies that have analyzed situations in organizations where identity ambiguity or confusion was evident. In the reviewed studies, issues in members' interpretations of organizational identity led to conflicts and disagreements that translated into the daily routines and practices of workers affecting the way they communicate and coordinate their activities. Our belief is that members' agreement and congruence about the shared understanding of their organization's identity has a positive impact on members' coordination and communication behaviors. But before addressing directly the operationalization of the proposed relationships, I need to borrow additional theoretical material from a distinct but related area of organizational research.

In this study, I have selected the contribution offered by the shared cognition branch of organizational studies as one avenue to enhance our knowledge of the concept of organizational identity. In particular, the notions of shared mental models (Klimoski and Mohammed, 1994; Cannon-Bowers and Salas, 2001) and transactive memory systems (Wegner, Raymond, and Erber, 1991; Lewis, Lange, and Gillis, 2005) are used as heuristics to explore the self-definition of an organization as understood by its members and its implications for two specific group processes. Although these concepts have mostly been studied at the team level, they represent knowledge structures that can

also be applied to a larger collective such as groups and organizations (Thompson and Fine, 1999). Therefore in the next section, I introduce elements from the literature on shared cognition to provide a more complete theoretical background on which this research is based.

2.2 Shared Cognition

Recently there has been a call for cross-fertilization among different disciplines to bridge the gaps in organizational identity research (Cornelissen, Haslam, Balmer, 2007). Integration with elements of cognitive social psychology appears one promising avenue to do so. Concepts such as shared mental models and transactive memory systems can help explain how identities are shared and where and how shared identities perceptions are held (Ravasi & van Rekom, 2003). Transactive memory systems (Wegner, 1986) refer to the concept of group memory based on individual members' knowledge about 'who knows what' in the group and the role of communication about such knowledge. Shared mental models (Klimoski & Mohammed, 1994) concern a form of organized shared understanding about the knowledge relevant to the successful accomplishment of tasks.

Haslam et al. (2003) mentioned that 'as a form of social identity, shared organizational identity is a basis not only for people to perceive and interpret their world in similar ways, but also for processes of mutual social influence which allow them to coordinate their behavior in ways that lead to concerted social action and collective products' (p.364). This happens because when people perceive themselves to share group

membership with another person in an organizational context, they may not only expect to agree with that person on issues relevant to their shared collective identity but they may also be motivated to strive actively to reach agreement and to coordinate their behavior in relation to those issues. Organizational identity is a particular form of social identity and can be seen as a cognitive frame or a perceptual lens that guides individual sense-making and constitutes a basis for shared perceptions and actions (Cornelissen, Haslam & Balm, 2007).

Therefore, this section centers its attention on social cognition by introducing the notions of shared mental models and transactive memory systems. Although slightly different concepts, they both have been applied in the past twenty years in organizational research to explore the cognitive structures of groups and develop a better understanding of the socially constructed phenomena that help members of a collective interpret their environment. But their application to the study of organizational identity constitutes a novel approach.

One of the premises of social psychological theory is that a central function of human interaction is to establish a common social reality. This is evident in Thompson and Fine (1999):

'Social cognition is not limited to individual thought about social objects but is a product of social interchange constructed, shared, and distributed among groups of individuals. Consequently social thoughts, affect, and behavior are explained not by studying people working alone but by studying groups of people engaged in social interaction' (p. 281).

Such social exchanges are generators of shared perceptions, behaviors, products, including memories, norms, beliefs systems, and interpretations of shared events and activities.

‘Collective identity is an interactive and shared definition produced by individuals that enables them to develop a common cognitive framework for assessing the environment. Collective identity is constructed through repeated activation of the relationships that link people and as a process it involves three dimensions, including: forming cognitive frameworks concerning the ends, means and field of action; activating relationships between people; and making emotional investments’ (Thompson and Fine, 1999: 285).

2.2.1 Shared mental models

The notion of shared mental models has been introduced by Cannon-Bowers and Salas (1990) to ‘account for the fluid, implicit coordination frequently observed in effective teams and to advance the understanding of how teams function in complex, dynamic, and ambiguous situations’ (Mohammed & Dumville, 2001: 90). Such cognitive structures represent the basis upon which an individual refers to knowledge, attributes meaning, and creates understandings (Klimoski & Mohammed, 1994): in other words, they are essential in the sense-making process of individuals in a collective (Gioia, 1986). Researchers have also argued that team mental models can facilitate information processing and foster greater coordination enabling team members to formulate accurate

work predictions about teamwork and task (Mohammed, Klimoski and Rentsch, 2000). Additional support to the importance of studying mental models and shared cognition in teams comes from Cannon-Bowers and Salas (2001). They view such concepts as exploratory mechanisms that help understand team performance by looking at how team members interact together, and suggesting that effective teams have similar and compatible knowledge that guide their behavior.

The work on shared mental models has convergent ideas relevant to the purpose of the current research. Shared knowledge does not only reflect specific task-related aptitudes, but also implies similarity in the cognitive frames of minds of people working together in reference to attitudes and beliefs about the work environment (Cannon-Bowers and Salas, 2001). I now turn to key findings from this literature that will help the reader to understand the theoretical congruence of the two related streams of research.

Mathieu, Heffner, Goodwin, Salas, and Cannon-Bowers (2000) have studied the influence of shared mental models on team processes and performance using flight-combat simulations. They distinguished between task-related and team-related aspects of the situations. The team-related mental model included teammates' knowledge, attitudes, preferences, and tendencies. Team processes referred to coordination, cooperation, and communication. The authors observed that team mental model sharedness was positively related to performance, a relationship that was fully mediated by team processes. Marks, Sabella, Burke, and Zaccaro's experiments (2002) looked at the impact of cross-training on team effectiveness. They also found that coordination mediated the relationship between shared team-interaction models and team effectiveness.

Although these findings do not point directly to shared knowledge about organizational identity, they suggest that people who work on the accomplishment of common goals tend to achieve better coordination and communication processes when they share some forms of knowledge not only about the task, but also about the people they work with and their surrounding environment. Our belief is that shared understandings about ‘who we are as an organization’ (i.e. organizational identity) constitute a category of shared knowledge that can have important consequences for organizational communication and coordination.

2.2.2 Transactive memory systems

A different but related concept in the shared cognition literature is labeled as transactive memory system. The foundation of transactive memory theory can be attributed to the work of Wegner (1986) who studied the behavior of intimate couples in their communications. Wegner (1986) defined a transactive memory system as ‘a set of individual memory system in combination with the communication that takes place between individuals’. In particular, the notion refers to the set of individuals’ memory system which combines the knowledge possessed by particular members with a shared awareness of who knows what (Mohammed & Dumville, 2001). Transactive memory systems develop when members of a group possess different expertise and knowledge and are accurate in the recognition of others’ expertise. According to research on transactive memory systems, communication is the key element that allows members to combine their different expertise and is therefore a key outcome variable. This is evident

in London, Polzer, and Omoregie (2005) when they assert that ‘over time, group members use their interpersonal congruence to find ways to rely on one another to obtain, process, and communicate information from distinct knowledge domains’ (p.115). These scholars further acknowledged how members’ cognitive representations are closely related to their views of identity. In the development of a new instrument that measured transactive memory systems in the field, Lewis (2003) also believed that such interpersonal congruence about members’ knowledge affect coordination processes.

From the review of the literature on organizational identity, shared mental models and transactive memory systems, it appears both theoretically and empirically that members working together in groups or teams who share certain some forms of knowledge about tasks, teammates, and their surrounding environment can achieve superior performance because of better group processes such as coordination and communication. I believe that organizational identity can be considered as a form of shared knowledge that has similar effects on group processes and I will test these relationships in this thesis. But before proceeding along this direction, I need to explicate the unit of analysis of this research and state the study’s hypotheses.

2.3 Level of Analysis and Generation of Hypotheses

One element characterizing the notion of organizational identity lies in its multi-level nature. This means that the concept can be approached and studied at any level of analysis: individual, group, organization, or industry level (Puusa, 2006). The interrelations between individual, group, and organization represent a complex feature

inherent in the nature of the organizational identity construct, and, therefore, demand particular attention in order to maintain a coherent logical line that is reflected throughout this work. At this stage, explanations regarding the study's level of analysis are required for us to avoid drawing erroneous conclusions or committing a "fallacy of the wrong level" (Klein, Dansereau, and Hall, 1994: 199).

Throughout this thesis, I have considered organizational identity as a phenomenon that is not only located in the mind of organizational members, but also distributed "in the intersubjective space created by group social relations" (Hatch and Schultz, 2004: 4). This means that members' beliefs and shared interpretations about organizational identity emerge in part from their social interactions and are rooted in discussions about 'who they are as an organization'. These assumptions imply the observation of social phenomena that cannot be limited and circumscribed merely to the individual-level of analysis. Many phenomena studied in social and behavioral sciences, such as communication and coordination, are also interpersonal in nature, and therefore cannot be attributed to one single person, but rather to multiple persons embedded within a social or organizational context. Thus, if we consider the observations as if they referred to one single individual involved in social interactions, we risk falling into what Duncan, Kanki, Mokros, and Fiske (1984) called 'pseudounilaterality'. The dyad is the fundamental unit of interpersonal interaction and interpersonal relations (Kashy and Kenny, 2000); therefore it will be considered as the focal unit for our analysis in this thesis.

In the next sections, I state and explain specifically the hypotheses that are tested in this study at the dyadic level. The core of the current work posits the investigation of members' agreement and sharing of perceptions in reference to multiple identity claims

and constructions. Agreement about organizational identity can be operationalized and related to members' perceptions of communication and coordination behaviors along two paths derived from the reviewed literature. In the first instance, I investigate if shared understandings about organizational identity can lead to similar interpretations about how members perceive the way coordination and communication take place within the studied organizational context (Hypotheses 1 and 2). Secondly, we turn our attention to the relation between members' similar interpretations about organizational identity and the strength of the perceived phenomena (Hypotheses 3 and 4). Finally, I explore if membership in organizational departmental divisions can be indicative of differences in members' interpretations of organizational identity in relation to coordination and communication behaviors during their dyadic interactions. Therefore, the last set of hypotheses (Hypotheses 1a, 2a, 3a, and 4a) examines the moderating effect of departmental affiliation in the above mentioned associations.

2.3.1 Hypotheses 1 and 2

People learn the labels with which they see and interpret their world through social interactions (Berger and Luckman, 1967). In particular, according to Bettenhausen (1991), it will depend on "the similarity of members' interpretation of other members' actions, and the similarity of the cognitive schemas that give the interpretations meaning if members implicitly agree or negotiate a common understanding of appropriate behavior in a determinate situation" (p. 350).

As mentioned earlier, one way of studying how shared interpretations about organizational identity relate to coordination and communication is to look at these interpersonal phenomena from a dyadic perspective. This will enable us to account for the social relation component that I have foreshadowed so far in our preliminary conceptual model and throughout the literature review. The research on shared mental models and transactive memory systems has acknowledged how members who operate in the same environment are likely to develop shared beliefs of the surrounding world. By considering shared organizational identity as a mental model that creates a common construction of reality, members who have similar interpretations about perceived identity are likely to have congruent cognitive frames about what goes on in their organization. This happens because people within an organization implicitly recall how to perform their work routines and are involved in social relational interactions driving their cognitive processes toward the same direction. Thus, I expect that members' similarity in understanding dimensions and attributes defining their organization's character to be associated with a convergent mental model capturing communication and coordination processes in their daily activities at work.

Specifically, Hypothesis 1 and Hypothesis 2 assert that members' dyadic agreement about the attributes expressing organizational identity will be associated with members' dyadic agreement about how coordination and communication behaviors take place in their organization:

Hypothesis 1: *Members' perceptual agreement in dyads about organizational identity will be associated with interpersonal agreement about their perceived quality of overall organizational coordination.*

Hypothesis 2: *Members' perceptual agreement in dyads about organizational identity will be associated with interpersonal agreement about their perceived level of overall organizational communication.*

2.3.2 Hypotheses 3 and 4

The first step in the elaboration of our conceptual model posits the association between members' agreement about expressions of organizational identity and similarity in their interpretations of the perceived coordination and communication processes. Furthermore, shared identity perceptions can act as a form of shared mental model that facilitates interpersonal interactions on the job and result in positive perceptions about these group processes.

Here, organizational identity as a shared cognition puts people on the same wavelength and same mindset translating in shared taken-for-granted knowledge and assumptions about the nature of their work and their organization. This alleviates the need for recurring discussions and cognitive questioning about the basics of communication and coordination in the workplace. As outlined in the Nag et al. (2007) study, the lack of agreement about organizational identity can often result in poor communication, as misinterpretation of the collective essence of an organization transcends in the daily routines of work activities. People who disagree about the

collective meaning of their organization, who their organization is, and what they do, are likely to have problems in the coordination processes resulting in conflictual concerted actions (Haslam et al., 2003).

Therefore, collective beliefs about identity should be associated with a positive quality in reference to the strength of the studied group processes, and Hypothesis 3 and 4 state that agreement about organizational identity in dyads will be associated with members' perceptions of good organizational coordination and communication:

Hypothesis 3: *Members' perceptual agreement in dyads about organizational identity will be associated with a high level of self-reported organizational coordination.*

Hypothesis 4: *Members' perceptual agreement in dyads about organizational identity will be associated with a high level of self-reported organizational communication.*

2.3.3 Moderating role of departmental affiliation

The formal organizational groupings act as the basic structural blocks within and across which communication and coordination operate. The functional departments represent the context where the studied interpersonal behaviors unfold and take place. Within organizations, people who work in the same department are confronted with the same tasks and routines and for this reason are more likely to engage in interpersonal interactions or to communicate about the way they should do their work. They also use

the same instruments and equipment to perform their job and operate in the same environment. In a similar manner, the extent to which they develop and agree on a shared cognitive schema about the identity of their organization should be stronger within departments than across departments because of the different formal and informal social interrelations that are created in a specific functional area of a firm.

Hence, I will refine Hypothesis 1 and Hypothesis 2 to include in our conceptual model the moderating role of departmental affiliation in the hypothesized relationships:

Hypothesis 1a: *Members' perceptual agreement in dyads about organizational identity will be more strongly associated with agreement about task coordination when members of a dyad operate in the same department than when they operate in different departments.*

Hypothesis 2a: *Members' perceptual agreement in dyads about organizational identity will be more strongly associated with agreement about the level of communication when members of a dyad operate in the same department than when they operate in different departments.*

In a similar fashion, the intensity to which organizational members agree about coordination and communication processes might differ according to their departmental affiliation. By applying the similar rationale to Hypothesis 3 and Hypothesis 4, I argue that:

Hypothesis 3a: *Members' perceptual agreement in dyads about organizational identity will be associated with a higher level of self-reported organizational coordination when members of a dyad operate in the same department than when they operate in different departments.*

Hypothesis 4a: *Members' perceptual agreement in dyads about organizational identity will be associated with a higher level of self-reported organizational communication when members of a dyad operate in the same department than when they operate in different departments.*

In the next chapter, some of the issues above mentioned about the proposed level of analysis will be further discussed because of their relevance in the measurement of the constructs and the analyses to test the hypotheses.

3. METHODOLOGY

Chapter 3 describes the research methods that were used in this case study of a Canadian microbrewery. I collected data with the aid of three different techniques: (a) semi-structured, one-on-one interviews, (b) survey questionnaires, and (c) direct on-site observations. The chapter is organized around two main sections explaining the (3.1) qualitative methods and the (3.2) quantitative methods adopted in this research. I also engaged in direct observations of members' routines and social interactions during the final phase of the quantitative data collection. Extensive field notes were taken about statements and expressions that emerged in the informal conversations between the members of the organization. Thus, the collection of evidence from multiple sources (interviews, survey, direct observations) has allowed addressing more reliably the behavioral issues that I intended to study (Yin, 2009).

The current research project took place in the span of one year, between spring 2008 and spring 2009. I first met with the microbrewery's president-founder in April 2008 to introduce the project and obtain his approval to research the organization. In return, I agreed to provide the company with a feedback report summarizing the findings. The collaboration process involved a series of interviews with some members of the management team and, in a second instance, the distribution of a questionnaire survey to all organizational members. Part of the surveys was returned by mail with pre-paid envelopes included in the survey package. In the final stage of the data collection process, I was granted permission by the president to distribute on-site additional questionnaires to increase the number of participants and obtain an adequate sample size. During two

sessions at the brewery, I also had the occasion to participate in informal communications with members of the staff and management and observe their routines and social interactions. I took detailed notes and collected information under the form of expressed statements capturing not only elements pertinent to the research questions of this thesis but also related to the cultural and structural aspects of the organization. I used the information obtained in this phase as additional material to reinforce the discussion of the research throughout the remainder of this thesis.

The interview phase aimed to extract relevant identity dimensions describing the character of the organization in order to produce items that would then be included in the survey to measure members' perceptions of organizational identity. To do so, I performed a qualitative analysis of the interview data and built upon those findings to phrase the questionnaire items. Parallel to this phase, I pre-tested with a pilot survey the items measuring members' perceptions of coordination and communication processes. A reliability analysis was performed and the final items included in the questionnaire were selected.

3.1 Context of the Research

The description of the studied organization offered in this section combines the information obtained directly from the president-founder during the first visit to the organization in April 2008 with elements from the company website information. For reasons of confidentiality, the company will be labeled in this document with the pseudonym 'La Brasserie'.

La Brasserie has been operating in the Canadian brewing industry for now twenty years. The brewing industry represents a relevant context for this research because of the existence of a plurality of organizational forms where elements of similarity and distinction between organizations are particularly salient (Carroll and Swaminathan, 2000; Lamertz et al., 2005). It is a highly competitive environment where the microbrewery segment holds a very small percentage of the market as compared to mass consumption big producers. La Brasserie is a microbrewery that was born during a movement of growth in the late 1980s which saw the explosion of specialty and artisan microbreweries and brewpubs in Québec and North America in general that collectively differentiate themselves from the large brewers but also compete among each other (Lamertz et al., 2005).

Based on a preliminary description of La Brasserie offered by its president, the organization can be segmented along four main departmental divisions: brewing, bottling/packaging, sales, and administration. The brewing and packaging divisions are under the supervision of the brew master and co-founder while the sales and the administration divisions report directly to the president. The majority of the members working in managerial positions have been part of the company since it was founded or joined La Brasserie in its first years of expansion.

During the development of this research project, La Brasserie went through a phase of organizational change. These changes not only included partnerships, but also a personnel reduction due to a major turnover in different departments of the organization. In June 2008, together with another Québec brewery, La Brasserie announced a business agreement specifically for sales, marketing and distribution of their respective brands

both within the province and beyond. The deal was acclaimed by the executives from both companies as a local partnership being *100% Québécois*. Elements of organizational change render issues of identity interpretations more salient (Corley and Gioia, 2004; Gioia and Thomas, 1996; Nag, Corley, and Gioia, 2007) and therefore represent an ideal research setting for the present study.

The results obtained from this study might also be generalized to other organizations in the same industry because Wenger and Snyder (2000) asserted that knowledge and experiences are shared throughout industries as some issues facing one organization might arise in other organizations belonging to the same industry.

3.2 Qualitative Methods

The first goal of this thesis was to explore the collective understanding that members of one particular organization operating in the beer brewing industry in Canada had about ‘who they are as an organization’ (i.e. their organizational identity). Following the discussion in Chapter 2, the current thesis is based on the assumption that organizational identity is a construct that can be measured at a perceptual level. Therefore the first part of Chapter 3 will center its attention on the methods and analysis that have permitted this measurement.

I now describe the sample, the procedures used to collect the qualitative data, the analysis of these data and the resulting identity attributes that were phrased and built into the identity perceptions items included in the quantitative survey.

3.2.1 Sample

The interviewees were selected based on their hierarchical and departmental position and suggested directly by the president of La Brasserie. Members located at the top of the organizational hierarchy were selected for the interviews because previous research has demonstrated that these members hold a more complex mental map of their organization's identity (Corley, 2004) and, therefore, were more likely to provide a richer account of organizational identity for the analysis. I was also interested in obtaining the perspectives of members operating in different divisions of the organization because they might have different understandings about what the identity of their organization is (Albert and Whetten, 1985; Whetten, 2006).

Hence, a total of six informants occupying top managerial positions and representing the major departments were interviewed: the president founder, the sales manager, the vice-president finance, the master brewer and co-founder, the shipping and receiving manager, and a bottling manager.

3.2.2 Data collection and procedure

The participants were informed about their involvement in this research project several weeks before the interviews and they received the list of questions together with a letter of introduction a few days before the interview took place. I followed the suggestion of Corley and Gioia (2004) and asked all the informants to speak as the representative voice of the collective (i.e., the voice of 'La Brasserie'). The interviews

were semi-structured, with open-ended answers, but I also encouraged the interviewees to deviate from the original questions and express issues and concepts that referred to their personal experiences in order to obtain additional information pertinent to the analysis. The interviews varied in their duration, but they all fell in the range of 30-45 minutes each. All were recorded on site at the brewery with audiotapes and transcribed verbatim.

An interview protocol used in previous research (Lamertz, 2006) was used for this purpose where the participants were asked to describe their organization's identity from their perspective as member of the brewery and also in relation to other organizations in the same industry. The interview questions were structured in four different sections: personal information, perspective of the employees, external perspective, and comparison with other breweries (see Appendices A-1 and A-2). Initially, participants were asked to provide generic information about their position at the brewery, and their personal involvement with the industry in general. A second set of questions asked the interviewees about their membership at the brewery and about their personal perceptions regarding the identity of their organization. They also expressed their beliefs regarding the identity perceptions of other employees at La Brasserie and how these affected their personal perceptions. The third set of questions focused on the interviewees' beliefs about how their brewery was perceived outside the organization and how such beliefs affected their personal perceptions of the identity of La Brasserie. The fourth and final questions asked the members to compare their brewery to other breweries from the point of view of their identity and what identity features of their organization were different and similar to those of others.

3.2.3 Data analysis

After subsequent readings of all the transcripts, I extracted a list of statements where the informants referred to their organization's identity. A statement was considered a representation of organizational identity when informants used collective expressions, such as "we" and "us", to describe their organization. Statements that mentioned the name of the brewery ("La Brasserie") as the subject were also retained in the analysis.

The text extracts were analyzed according to Miles and Huberman's (1984) categorization and theme analysis. I started the analysis by identifying initial concepts in the data and group them into broad categories (open coding). An example is the recurrent use of phrases such as "we make quality beer" and "we're like a family".

A preliminary analysis of all the transcripts produced a total of 158 identity statements. A keyword or label synthesizing its content was attributed to each statement. After operating the first level open coding on all identity statements, I then progressively grouped them into broader categories by identifying similarities among them at a higher level of abstraction. For example, the category labeled *Quality producer* included preliminary themes such as the quality of ingredients, overall product quality, respect of the brewing traditions and award-winner. I also moved from a within case display to across case display analysis by conducting a constant comparison among the identity statements expressed by the different informants. In the next section, I provide the final identity dimensions that were uncovered, with a definition and some text examples.

3.2.4 Results

The qualitative analysis of the text derived from the interviews has produced a detailed portrait of what is the identity and character of La Brasserie, as perceived by members located at the top of the hierarchy and operating in different areas of the organization. A total of five dimensions were identified that expressed the identity of La Brasserie.

Firstly, the informants have depicted La Brasserie's organizational identity as differentiating itself from other breweries because of its high commitment to quality. This is reflected in the production processes which use ingredients of the best quality and in the company's mission "to produce award-winning, world-class specialty beers" (corporate website). Throughout the organization, members strongly believe in the superior quality of their products as a distinctive feature. One example is the affirmation of an employee in the packaging department: "*Quality is very important here. Even when we do the boxes, we have to do them very well.*"

Another central feature about La Brasserie's identity is members' beliefs that all together they constitute a family where everyone works together as a team and can count on his/her colleagues to discuss personal matters as well. The informants have evidenced during the interviews that mutual trust and help is one important element characterizing interpersonal relations within the organization. Frequent expressions and informal attributes used during lunch break conversations belong to the semantics of familial ties: "*We're like brothers here.*" And as another employee affirms: "*The managers are really nice people; you can talk to them-even about personal things*".

La Brasserie's identity also appeared to include some traits related to the geographic location of the company. In particular, members' answers frequently expressed a sense of pride linked to the fact that the company is located in Montréal, that they are *Montréalers* and that consumers perceive the products as being originated from this location. The president-founder himself mentioned how the company is "*very much part of the Montréal landscape*".

Another recurrent theme that emerged from the interviewees' information about their organization's identity was the physical presence of the President-founder inside the firm. Through his personality and leadership, this individual has been able to transmit his values and vision to La Brasserie's employees. He also represents a source of motivation and commitment for the company's staff as one member states: "*The fact that he is himself (Founder) present in the company means that he's implicated and therefore it is worth for us too to be implicated and involved here.*"

A final dimension describing the identity of La Brasserie centers on the involvement of the company in the local community. The support of the arts, community events and charities is an element representing one of the central, enduring, and distinctive characteristics perceived by the informants and expression of 'who they are as an organization'. Material manifest of this identity dimension is a Centre located right next to the brewery which hosts regular events including music shows, arts expositions, film screenings, as well as workshops, events and beer tasting activities. Through this Centre, the brewery also offers money prizes and grants to help artists.

It is important to note that the frequencies at which statements pointing to each dimension differ across the informants and that some attributes are mentioned with more

emphasis than other. This can be attributed to the importance that the informants have put on certain aspects of the brewery emphasizing from their perspective what they believed was more characterizing the organization.

To summarize, the final identity dimensions were labeled: *Quality Producer* (48.5%), *Family/Team* (28.5%), *Influence of the Founder* (10%), *Made in Montréal* (6.9%) and *Involvement in the Local Community and Social Events* (2.3%)¹. Two additional distinct dimensions were also considered in the early phase of the analysis, but were finally excluded in the final interpretation of the qualitative results because statements pointing to these dimensions were not recurring across the majority of the informants. However, in the formulation of the identity statements included in the survey questionnaire, I included two statements about these additional attributes in order to gather perceptions on a larger variety of identity dimensions with explorative purposes. These two dimensions were labeled *Industry Leader* (2.3%)² and *Pioneer* (0.8%) and are defined in Table 1 together with the other identity attributes of La Brasserie. For each dimension, a text example from the interview transcripts is also offered.

¹ The frequencies to which a given identity dimension occurred in the interview statements is indicated in parentheses. Also, 100% of the informants included the *Quality producer* and *Family/team* traits in their description of La Brasserie; 66.7% mentioned the *Made in Montréal* and *Influence of the Founder* characteristics; 33.3% included *Involvement in the local community and social cultural events*; 16.6% the *Industry leader* and *Pioneer* attributes.

² Note that the *Industry leader* dimension was excluded in the final qualitative results because mentioned only by one informant. The *Involvement in local community and social events* attribute instead is not only mentioned by more than one interviewee but also appears as an important feature of the organization because of the existence of the centre supporting local artists. The company website also depicts this initiative as a very important feature of the organization.

Table 1

Identity dimensions, definitions, and text examples

| Identity dimension | Definition | Text example |
|--|--|---|
| Quality Producer | Any statement related to the quality of the product, the quality of its ingredients, the respect of traditional production processes, and any form of recognition or award related to the product quality. | “We are committed to quality. We’re a quality brewer” |
| Family/Team | Is indicative of a group of people who share the same values and that are in a close relationship in terms of trust, mutual help and discussion of personal matters. | “La Brasserie is a family, not only a business” |
| Made in Montréal | Reflects the close attachment to the geographic location of products’ and company’s origin. | “We’re Montréalers, Québécois” |
| Influence of the Founder | Importance of the leadership role of the founder in transmitting his vision and values as a function of his personality and presence in the company. It is a reflection also of the strong connection between the founder, the company, and its members. | “There is a very close link between the firm and the president founder” |
| Involvement in Local Community and Social Events | Refers to any company’s initiative linked to the organization and sponsorships of cultural events and its contribution to the social reality of the local community. | “We care about the community” |
| <i>Pioneer</i> | <i>Indicates the innovative role that the organization has played by being one of the first to originate a new activity, method, or technical development in a specific industry and/or territory.</i> | <i>“Employees identify us as a pioneer in Québec”</i> |
| <i>Industry Leader</i> | <i>Reflects the guiding role of an organization by establishing standards or directions in terms of operations, activities, and performance, and acting as a reference for other organizations in the industry.</i> | <i>“La Brasserie is the reference in the brewing industry”</i> |

Note. The two additional dimensions ‘Pioneer’ and ‘Industry Leader’ are in italics

3.3 Quantitative Methods

I now describe the processes and analyses involved in the production of the questionnaire that was submitted to the members of La Brasserie. In this section, I discuss the sample, the measures included in the survey, and the data collection and analysis procedure.

The results derived from the qualitative analysis previously described were used to create the items measuring participants' perceptions of organizational identity. The items assessing coordination and communication were obtained from pre-existing scales. These items were slightly modified from the original versions to suit the context of the present study and were pre-tested with a separate sample. Basic demographic information was also measured in the survey.

3.3.1 Sample and participants

At the time of the data collection, the organization numbered 86 employees. Contract workers were excluded from the sample population. A total of 35 completed questionnaires were completed and returned, with a response rate of 41%.

According to the demographic information provided by the participants, the final sample was composed of 13 females (37%) and 20 males (57%). Two participants did not indicate the gender. According to the organizational departmental divisions described in Chapter 2, 9 members operated in Brewing (26%), 12 in Packaging (34%), 5 in Sales (20%), and 7 in Administration (14%). Two participants did not indicate their

departmental affiliation. The final data provided the following representativeness of all organizational departments: 40% of the brewing department, 59.1% of the bottling department, 71.4% of the administration, and 19.2% of the sales department. The members' average working experience at La Brasserie was 5.2 years.

3.3.2 Data collection and procedure

The members of La Brasserie were informed about their participation in a graduate student's research project before the distribution of the survey. Several posters were displayed in different areas accessible to all members of the brewery. An envelope was distributed to all the staff and management members of La Brasserie. Upon suggestion of La Brasserie's president, it was decided that the survey 'package' would be attached to the employees' paycheck in order to increase the visibility of the survey and increase the rate of participation. Its content included a letter introducing the purpose of the survey, an informed consent form, the questionnaire, and a pre-paid mail-back envelope to return the completed survey to the researcher. All the documents were provided in a French version and an English version. They were translated to French by the researcher and back translated to English separately by two research assistants to avoid discrepancies in the meaning of the content. All the management and staff of La Brasserie were given the opportunity to complete paper-and-pencil questionnaires. Part of the survey was returned by mail in the pre-paid envelope that was provided. During the data collection process, a second round of surveys was distributed with the same method together with reminder letters. During a third round of data collection, I was granted

permission to distribute additional questionnaires on-site at the brewery during two sessions, which provided a satisfying sample size for this research. A total of 14 surveys were returned by mail and 21 surveys were collected on-site at the brewery.

3.3.3 *Organizational identity perceptions*

Members' perceptions of organizational identity were assessed by asking the participants to rate 12 statements pointing to their organization's identity. These items reflected the five final identity dimensions elicited in the qualitative analysis plus the two additional attributes that I mentioned in the early phase of the analysis.

The identity perceptions questions were phrased based on the previous work of Whetten and Foreman (2002), asking participants to indicate the importance that the management of the organization place on different aspects. The responses were provided on a 5-point Likert scale (1=not important at all to 5=very important). The complete list of items is available in Appendices D-1 and D-2.

Some of the items cover different facets of one single identity dimension and incorporate several specific ideas from earlier levels of aggregation. In particular, two items refer to the *Quality Producer* dimension (Items 1 and 2); two items ask about the *Involvement in Local Community and Social Events* (Items 8 and 9); two items indicate the *Family/Team* dimension (Items 11 and 12); one item point to the *Made in Montréal* dimension (Item 7); and one to the *Influence of the Founder* (Item 10). Three additional items measured members' perceptions about the *Industry Leader* (Item 3 and 4) and *Pioneer* (Item 6) attributes. I recall that these dimensions emerged from early ideas in the

qualitative analysis and, although they were not included in the final five identity dimensions, they might represent interesting source of information about members' perceptions of their organization's identity. In addition, one item (Item 5) was included without any modification referring to the normative aspect of organizational identity. The statement asked to rate the importance of celebrating the company past successes. Also, all items evidenced significant negative skewness (i.e. the absolute value of the skewness statistics is more than two times that of the standard error) which means that participants used relatively few low values to rate the importance of the perceived identity items. Table 2 reports the mean, standard deviation, and skewness statistics of the perceived organizational items.

Table 2

Perceived organizational identity items: Mean, standard deviation, skewness

| <i>Item</i> | <i>Min</i> | <i>Max</i> | <i>M</i> | <i>SD</i> | <i>Skewness</i> | |
|--|------------|------------|----------|-----------|------------------|-------------------|
| | | | | | <i>Statistic</i> | <i>Std. Error</i> |
| High product quality standards | 3 | 5 | 4.86 | .430 | -3.220 | .398 |
| Quality of the ingredients | 3 | 5 | 4.77 | .490 | -2.112 | .398 |
| Working together as a team | 2 | 5 | 4.63 | .770 | -2.098 | .398 |
| Commitment to family values | 1 | 5 | 4.49 | .951 | -2.242 | .398 |
| Being a Montréal company | 2 | 5 | 4.66 | .873 | -2.346 | .398 |
| Founder's personal presence | 2 | 5 | 4.57 | .850 | -2.064 | .398 |
| Involvement in local community | 3 | 5 | 4.77 | .490 | -2.112 | .398 |
| Support cultural and social events | 3 | 5 | 4.77 | .490 | -2.112 | .398 |
| <i>Being an industry leader</i> | 3 | 5 | 4.66 | .684 | -1.783 | .398 |
| <i>An example for other breweries</i> | 2 | 5 | 4.57 | .815 | -1.801 | .398 |
| <i>Celebrate past company success</i> | 1 | 5 | 4.37 | .910 | -1.827 | .398 |
| <i>Pioneer for Québec microbreweries</i> | 2 | 5 | 4.60 | .775 | -1.965 | .398 |

Note. N=35

3.3.4 Coordination items

Organizational members' coordination was measured with 10 items adopted and modified from a scale developed and validated by Lewis (2003) to study transactive memory systems in the field. Respondents were asked the extent to which they agreed to a list of statements about organizational members' coordination during their daily activities at work. The first five items referred to members' coordination in their task processing when they interact with members of another department of the organization. The remaining five items focused on members' coordination inside their department. Answers were provided on a 5-point Likert scale (1=strongly disagree to 5=strongly agree). The overall reliability of the coordination scale evidenced a Cronbach's alpha of 0.709². The complete list of items is available in Appendices B-1 and B-2.

3.3.5 Communication items

Communication among the members of the brewery was measured with 11 items modified from the Downs and Hazen (1977) communication satisfaction questionnaire (CSQ). The participants were asked to indicate their agreement on the statements about their daily communications at work. Responses were given on a 5-point Likert scale (1=strongly disagree to 5=strongly agree).

³ The coordination items were merged into one scale because the reliabilities of the separate scales measuring coordination within and across departments were lower than the combined scale and because of the conceptual correspondence between organizational identity and overall organizational coordination.

The items included statements such as ‘Communication with each other in my company is accurate and free-flowing’ and ‘Person-to-person communication at La Brasserie makes all staff feel a part of the company’. The scale measuring perceptions of communication for the current research is highly reliable with a Cronbach’s alpha of 0.937.

Although developed more than thirty years ago, the CSQ is one of the most widely used instruments in scholarly research to study communication in an organizational setting (see Clampitt & Berk, 2000; and Mueller & Lee, 2002). The original version of the CSQ proposes a study of communication along 8 dimensions: communication climate, relation with supervisor, organizational integration, media quality, horizontal and informal communication, corporate perspective, relations with subordinates, and personal feedback. In this study, I was interested in the level of interpersonal communication between the members of the organization and in the general level of communication between the company and its employees. In order to select the items that were suitable for the context of the present study, all the items contained in the CSQ were reviewed by both the researcher and a subject matter expert with several years of research experience in the Canadian beer brewing industry. The selected items reflected three dimensions of communication: communication climate, horizontal communication, and media quality. In this research, however, I have not made a distinction in the construct along the different dimensions and I have treated communication as a single variable. The complete list of items is available in Appendices C-1 and C-2.

3.3.6 Coordination and communication items: pilot test

Before realizing the final version of the survey, the items measuring the dependent variables were subject to a pre-test. The coordination items were tested together with the communication items for reliability. A sample of 36 individuals working in three different multi-departmental organizations completed a 15 minute-questionnaire. They were told that the intent of the exercise was to help a graduate student in his Master' thesis project. The pilot survey included a letter of presentation explaining the purpose of the study, an informed consent form, the questionnaire, and a feedback sheet containing questions about the face validity of the survey (clarity of the items and general impressions about the survey). The pilot questionnaire included 12 items for the coordination construct (within and across departments) and 14 items measuring the communication construct. A statistical analysis was performed to test the reliability of the scales. The coordination scale presented a Cronbach's alpha of 0.67 and the communication scale presented an alpha of 0.82. Two items were removed from the coordination scale and three from the communication scale because they did not co-vary adequately with the other items.

3.3.7 Quantitative data analysis

I now describe the various steps in the analysis of the quantitative data obtained from the surveys. First, dyadic variables were created that indicated the degree of members' disagreement on each identity dimension, and perceived coordination and

communication. Measures of the perceptual strength of the dependent constructs were also elaborated at the dyadic level. A brief explanation considering the treatment of the missing observations in the quantitative survey is also outlined. Then, the quadratic assignment procedure (QAP) is explained and justified as the statistical technique selected to calculate the correlation and regression coefficients and test the hypothesized associations.

3.3.7.1 Creating dyadic variables

In order to analyze the data, I first created a set of matrices displaying the agreement/disagreement of members' responses at a dyadic level using the network analysis software UCINET 6 (Borgatti, Everett, and Freeman, 2002). This operation increased the number of observations to 1190 for the purpose of the analyses. For each of the 1190 dyads, measures of profile dissimilarity corresponding to each of the eight organizational identity variables as well as the coordination and communication constructs were computed. Disagreement or dissimilarity measures were calculated because they are common approaches in network studies to measure perceptual agreement and similarity. Also, it is important to note that different identity attributes were explored separately because they correspond to different substantive semantics and the small sample size impeded the meaningfulness of performing a factor analysis or other data reduction technique.

Because members' perceptions on the different identity dimensions corresponded to one single item (i.e., *Celebrate past success, Pioneer, Made in Montréal, and Influence*

of the founder) and multiple items (i.e., *Quality producer, Industry leader, Involvement in the local community and social events, Family/team*), different approaches were adopted to generate agreement scores. In the first case, I converted the vector of valued attributes to a matrix based upon absolute differences. Thus, each value in the dyadic matrix was representation of the difference in rating on the five-point Likert scale measuring the importance of a given organizational identity dimension between each pair of respondents. Therefore, low scores are expressions of low dissimilarity or high agreement (a score of zero meaning complete agreement between two members on a given identity attribute) and high scores represent a high level of dissimilarity (low agreement). In the case of identity dimensions composed of multiple items, the dyadic values of profile similarity were computed based on the Euclidean distance measure between the individual measures for each pair of respondents. Similarly to the previous situation, I obtain low scores for high levels of agreement (low dissimilarity) and high scores when there is little or no agreement (high dissimilarity) between two members in their ratings.

Agreement measures of perceived communication and coordination processes were treated in the same manner as identity attributes composed of multiple items. Euclidean distances were calculated to obtain dissimilarity scores between each pair of respondents where low values mean high agreement and high values exhibit low agreement between the members of a dyad.

On the other hand, strength measures were computed using average scores on each group process in order to obtain an overall perceptual assessment of the quality of coordination and communication for each respondent at an individual level. Then, dyadic values were obtained by generating matrices displaying the product values of the average

scores in each pair of respondents. This procedure allowed creating a variable that produced high values when two members both have perceptions of high communication or coordination quality and low scores if they both have negative perceptions (e.g., members of a dyad perceiving very high levels of organizational communication could exhibit a score of $5 \times 5 = 25$ if they both rated all communication items to the maximum end of the 5-point Likert scale).

Three additional independent dyadic variables were created as control variables, but also benchmarks against which to assess the hypothesized associations: departmental affiliation, experience, and hierarchical position. To create the departmental affiliation variable, for each department one dummy was coded as 1 when two people share membership in it, and zero otherwise. Then, all the four variables (i.e., administration, brewing, bottling, and sales) were added together into one matrix representing overall same or different department affiliation. Chapter 2 has already discussed how formal departmental divisions might be susceptible to affecting the associations between perceived similar interpretations about organizational identity, coordination, and communication.

Experience is representative of the combined amount of time that each dyad has spent within the organization and was calculated by multiplying the years of experience between the two members of a dyad (e.g., the two founders have a combined experience at the brewery of $20 \times 20 = 400$ years). Other techniques have also been considered for approaching the aggregate work experience in dyads such as additive operations, but members' years of experience were combined by multiplication to highlight the differences between low values and high values. This variable was included in the

analysis because people who have shared membership in the same organization for many years are more likely to have developed more detailed mental representations about identity. They also had the opportunity to engage in more frequent interpersonal interactions and discussions about their social environment which in turn could also have an effect on the dependent variables.

Hierarchical position was evidenced by Corley (2004) as a basis for differentiation in organizational identity perceptions. As mentioned in the description of our qualitative analysis, people located at higher levels of responsibility might hold a more complex and detailed mental map about organizational identity. In this thesis, the distinction is made between management members and staff members. The organization counts four managers who represent the head of each department within the brewery. Therefore, hierarchical position was created as a dummy variable matrix coded as 1 when two members are both managers and zero otherwise. The descriptive statistics for the dependent, independent, and control variables are reported in Table 3.

Table 3

Descriptive statistics for each dyadic variable

| <i>Variable</i> | <i>M</i> | <i>SD</i> | <i>Min</i> | <i>Max</i> |
|--|--------------|--------------|--------------|--------------|
| Coordination (disagreement) | 4.092 | 1.504 | 0.000 | 8.101 |
| Communication (disagreement) | 3.913 | 1.819 | 0.000 | 9.950 |
| Coordination (strength) | 17.010 | 2.877 | 9.280 | 25.000 |
| Communication (strength) | 16.819 | 4.053 | 5.720 | 25.000 |
| Departmental affiliation | 0.271 | 0.444 | 0.000 | 1.000 |
| Experience | 28.449 | 46.923 | 0.000 | 400.000 |
| Hierarchical position | 0.792 | 0.406 | 0.000 | 1.000 |
| Quality producer | 0.533 | 0.752 | 0.000 | 2.828 |
| Family/team | 1.167 | 1.278 | 0.000 | 4.472 |
| Made in Montreal | 0.615 | 1.070 | 0.000 | 3.000 |
| Influence of the founder | 0.713 | 0.968 | 0.000 | 3.000 |
| Involvement in local community and social events | 0.607 | 0.875 | 0.000 | 2.828 |
| <i>Industry leader</i> | <i>1.027</i> | <i>1.099</i> | <i>0.000</i> | <i>3.606</i> |
| <i>Celebrate past success</i> | <i>0.871</i> | <i>0.948</i> | <i>0.000</i> | <i>4.000</i> |
| <i>Pioneer</i> | <i>0.659</i> | <i>0.875</i> | <i>0.000</i> | <i>3.000</i> |

Number of observations: 1190

3.3.7.2 Treatment of missing data

The returned surveys contained a number of missing observations in the coordination and communication scales. Also, two participants did not report their departmental affiliation, and one respondent did not indicate the number of years of experience at the brewery.

Specifically, in the coordination scale, one participant did not rate two items, another one three items, and a last respondent did not indicate one rating. In the

communication scale, one participant did not rate two items and another one displayed four missing values. In order to overcome the nonresponse item issue in the two scales, I used the mean of the respondent's answers on the remaining items to replace each participant's missing datum for the item. Although this method risks to attenuate variance estimates, it was chosen to preserve the data and for its simplicity (Roth, 1994). The missing value in the experience variable was replaced by the average working experience of the other respondents (5.2 years).

The departmental affiliation control variable was originally calculated with the affiliation routine available in UCINET 6, but by doing so the missing values were transformed in 0 in the coding yielding to differentials in the calculation of the regression and correlation coefficients. Membership in each department was displayed in the respective matrices with the missing values and then added together in one matrix to generate overall same or different membership, as explained in section 3.3.7.1. In this case, mean substitution did not represent a valid option in the treatment of missing observations and, for this reason, the two absent values were excluded from the analysis leaving the final number of respondents at 33 in the MRQAP analysis.

3.3.7.3 *QAP analysis*

The inherently interdependent nature and the missing assumption of normal distribution in the study's dyadic data impede the usage of traditional ordinary least squares (OLS) regression to test our hypotheses (Krackhardt 1987, 1988). Alternatively, I have used the quadratic assignment procedure (QAP) correlation and multiple regressions

(MRQAP) which are ‘nonparametric, permutation-based tests that preserve the integrity of the observed structures’ (Krackhardt, 1987: 174). This method was implemented using the routines available in UCINET 6 (Borgatti, Everett, and Freeman, 2002). The software first calculates regular correlation and regression coefficients; secondly, it operates a large number of random permutations of all the rows and columns of one of the data matrices to re-calculate the coefficients. The original coefficients are compared to the ones obtained from the random permutations to estimate the proportion of each parameter as large or as small. The significance values are obtained by calculating the probability estimates that each coefficient could have yielded a value as extreme as the one observed only by chance. As an example, if the dependent data matrix is permuted 2000 times, and, out of the 2000 times, only 200 permutations generate regression coefficients as large as the observed value, the probability that the actual coefficients could result from random sampling errors is close to 0.1. A similar procedure was adopted to calculate the correlation coefficients between all variables as exposed in Table 4.

3.3.7.4 Departmental affiliation as a moderator

In order to account in the regressions for the moderating role of departmental affiliation as hypothesized in section 2.3.3 (Hypotheses 1a, 2a, 3a, and 4a), I also included all the interaction terms between departmental affiliation and each dyadic independent variable measuring the perceived organizational identity dimensions. The interaction terms were represented by matrixes displaying for each dyad the multiplicative effect of each identity disagreement score and the corresponding value in

the departmental affiliation matrix. Similarly to the method used to test Hypotheses 1 to 4, I have explored separately in the regressions each identity dimension and its interaction term.

The coefficients and their significance derived from each regression operation are reported in tables 5 to 8. In separate columns, the interaction effects are exhibited as well.

Chapter 4 summarizes all the results of the quantitative data analysis.

Table 4

QAP Correlations

| Variable | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) | (15) | | |
|---------------------------------|--------|--------|---------|----------|---------|----------|---------|----------|-------|--------|---------|--------|---------|--------|---------|--------|-------|
| (1) Coordination dissimilarity | 4.092 | | | | | | | | | | | | | | | | |
| (2) Coordination strength | 17.010 | 2.877 | -0.426* | 1.000 | | | | | | | | | | | | | |
| (3) Communication dissimilarity | 3.913 | 1.819 | 0.073 | -0.219† | 1.000 | | | | | | | | | | | | |
| (4) Communication strength | 16.819 | 4.053 | 0.016 | 0.411* | -0.603* | 1.000 | | | | | | | | | | | |
| (5) Departmental affiliation | 0.271 | 0.444 | 0.016 | 0.024 | -0.070 | 0.122** | 1.000 | | | | | | | | | | |
| (6) Experience | 28.449 | 46.923 | -0.043 | 0.020 | 0.020 | -0.153† | 0.240** | -0.009 | 1.000 | | | | | | | | |
| (7) Hierarchical position | 0.792 | 0.406 | 0.084 | 0.020 | 0.020 | -0.113 | 0.025 | -0.430 | 1.000 | | | | | | | | |
| (8) Quality producer | 0.533 | 0.752 | 0.212† | -0.529* | 0.199† | -0.259† | -0.022 | -0.197** | 0.129 | 1.000 | | | | | | | |
| (9) Industry leader | 1.027 | 1.099 | -0.082 | -0.102 | 0.315* | -0.350* | 0.040 | -0.357* | 0.152 | 0.399* | 1.000 | | | | | | |
| (10) Past success | 0.871 | 0.948 | -0.051 | -0.154 | 0.253** | -0.309** | -0.096† | -0.151† | 0.087 | 0.081 | 0.220† | 1.000 | | | | | |
| (11) Pioneer | 0.659 | 0.875 | 0.081 | -0.154 | 0.103 | -0.148 | 0.017 | -0.192** | 0.121 | 0.050 | 0.240** | 0.601* | 1.000 | | | | |
| (12) Montreal | 0.615 | 1.070 | 0.026 | -0.366* | 0.279** | -0.367** | -0.046 | -0.165† | 0.109 | 0.566* | 0.355** | 0.421* | 0.431* | 1.000 | | | |
| (13) Local community | 0.607 | 0.875 | 0.173† | -0.301** | -0.025 | -0.035 | 0.001 | -0.194** | 0.136 | 0.495* | 0.328** | 0.204† | 0.373** | 0.505* | 1.000 | | |
| (14) Founder | 0.713 | 0.968 | 0.124 | -0.295** | 0.377* | -0.392* | -0.047 | -0.166† | 0.121 | 0.225† | 0.203† | 0.675* | 0.644* | 0.562* | 0.263† | 1.000 | |
| (15) Family/team | 1.167 | 1.278 | 0.057 | -0.258** | 0.385* | -0.427* | -0.053 | -0.225** | 0.143 | 0.066 | 0.305** | 0.739* | 0.723* | 0.422* | 0.304** | 0.821* | 1.000 |

Note. Number of permutations: 5000

* $p \leq 0.01$; ** $p \leq 0.05$; † $p \leq 0.1$

Table 5

MRQAP: Coordination (dissimilarity)

| <i>Variable</i> | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
|-------------------------------|--------|---------|---------|--------|--------|--------|--------|-------|--------|
| Departmental affiliation | 0.012 | 0.017 | 0.017 | 0.016 | 0.013 | 0.007 | 0.009 | 0.011 | 0.013 |
| Experience | -0.008 | 0.028 | 0.027 | -0.048 | -0.049 | -0.017 | -0.016 | 0.004 | 0.004 |
| Hierarchical position | 0.080 | 0.069 | 0.070 | 0.080 | 0.080 | 0.082 | 0.084 | 0.077 | 0.077 |
| Quality producer | | 0.209† | 0.170† | | | | | | |
| Quality producer x Dept. aff. | | | 0.072† | | | | | | |
| Industry leader | | | | -0.112 | -0.134 | | | | |
| Industry leader x Dept. aff. | | | | 0.042 | | | | | |
| Past success | | | | | -0.060 | | -0.076 | | |
| Past success x Dept. aff. | | | | | | | 0.033 | | |
| Pioneer | | | | | | | | 0.072 | 0.086 |
| Pioneer x Dept. aff. | | | | | | | | | -0.028 |
| Adjusted R-square | 0.006 | 0.047** | 0.050** | 0.016 | 0.016 | 0.008 | 0.008 | 0.010 | 0.010 |

Note. Number of permutations: 2000

**p ≤ 0.01; **p ≤ 0.05; †p ≤ 0.1*

Table 5 (continued)

MRQAP: Coordination (dissimilarity)

| <i>Variable</i> | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
|------------------------------|--------|--------|---------|--------|--------|--------|-------|-------|--------|
| Departmental affiliation | 0.012 | 0.013 | 0.015 | 0.013 | 0.014 | 0.018 | 0.018 | 0.015 | 0.014 |
| Experience | -0.008 | -0.006 | -0.005 | 0.020 | 0.020 | 0.008 | 0.008 | 0.001 | 0.001 |
| Hierarchical position | 0.080 | 0.079 | 0.081 | 0.070 | 0.069 | 0.073 | 0.073 | 0.078 | 0.076 |
| Montreal | | 0.017 | -0.015 | | | | | | |
| Montreal x Dept. aff. | | | -0.015† | | | | | | |
| Local community | | | | 0.167† | 0.181† | | | | |
| Local community x Dept. aff. | | | | | -0.027 | | | | |
| Founder | | | | | 0.117 | 0.123 | | | |
| Founder x Dept. aff. | | | | | | -0.011 | | | |
| Family/team | | | | | | 0.047 | 0.070 | | |
| Family/team x Dept. aff. | | | | | | | | | -0.050 |
| Adjusted R-square | 0.006 | 0.005 | 0.008 | 0.032† | 0.031† | 0.018 | 0.017 | 0.007 | 0.008 |

Note. Number of permutations: 2000

**p ≤ 0.01; **p ≤ 0.05; †p ≤ 0.1*

Table 6

MRQAP: Coordination (strength)

| <i>Variable</i> | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
|-------------------------------|-------|---------|---------|--------|--------|--------|---------|--------|--------|
| Departmental affiliation | 0.021 | 0.008 | 0.007 | 0.025 | 0.021 | 0.007 | 0.000 | 0.023 | 0.022 |
| Experience | 0.034 | -0.061 | -0.062 | -0.005 | -0.005 | 0.013 | 0.011 | 0.007 | 0.007 |
| Hierarchical position | 0.034 | 0.064 | 0.065 | 0.034 | 0.033 | 0.038 | 0.034 | 0.041 | 0.041 |
| Quality producer | | -0.550* | -0.575* | | | | | | |
| Quality producer x Dept. aff. | | | 0.046 | | | | | | |
| Industry leader | | | | -0.109 | -0.139 | | | | |
| Industry leader x Dept. aff. | | | | | 0.058† | | | | |
| Past success | | | | | | -0.155 | -0.114 | | |
| Past success x Dept. aff. | | | | | | | -0.086† | | |
| Pioneer | | | | | | | | -0.158 | -0.168 |
| Pioneer x Dept. aff. | | | | | | | | | 0.021 |
| Adjusted R-square | 0.000 | 0.289* | 0.290* | 0.010 | 0.011 | 0.023 | 0.027† | 0.023 | 0.023 |

Note. Number of permutations: 2000

**p ≤ 0.0; **p ≤ 0.05; †p ≤ 0.1*

Table 6 (continued)

MRQAP: Coordination (strength)

| <i>Variable</i> | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
|------------------------------|-------|---------|---------|----------|----------|----------|----------|----------|----------|
| Departmental affiliation | 0.021 | 0.004 | 0.003 | 0.020 | 0.020 | 0.007 | 0.007 | 0.068 | 0.006 |
| Experience | 0.034 | -0.020 | -0.020 | -0.018 | -0.018 | -0.008 | -0.008 | -0.020 | -0.020 |
| Hierarchical position | 0.034 | 0.052 | 0.052 | 0.054 | 0.054 | 0.053 | 0.053 | 0.049 | 0.049 |
| Montreal | | -0.375* | -0.362* | | | | | | |
| Montreal x Dept. aff. | | | -0.028 | | | | | | |
| Local community | | | | -0.311** | -0.314** | | | | |
| Local community x Dept. aff. | | | | | 0.005 | | | | |
| Founder | | | | | | -0.302** | -0.297** | | |
| Founder x Dept. aff. | | | | | | | -0.010 | | |
| Family/team | | | | | | | | -0.269** | -0.261** |
| Family/team x Dept. aff. | | | | | | | | | -0.018 |
| Adjusted R-square | 0.000 | 0.136* | 0.136* | 0.092** | 0.092** | 0.088** | 0.087** | 0.068** | 0.067** |

Note. Number of permutations: 2000

**p ≤ 0.01; **p ≤ 0.05; †p ≤ 0.1*

Table 7

MRQAP: Communication (dissimilarity)

| <i>Variable</i> | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
|-------------------------------|---------|---------|----------|---------|----------|---------|---------|---------|---------|
| Departmental affiliation | -0.068† | -0.063† | -0.062† | -0.078† | -0.073 | -0.046 | -0.049 | -0.069† | -0.070† |
| Experience | -0.141† | -0.111 | -0.109 | -0.032 | -0.032 | -0.108 | -0.109† | -0.128† | -0.127† |
| Hierarchical position | 0.030 | 0.020 | 0.019 | 0.031 | 0.031 | 0.023 | 0.021 | 0.026 | 0.026 |
| Quality producer | | 0.173† | 0.231† | | | | | | |
| Quality producer x Dept. aff. | | | -0.106** | | | | | | |
| Industry leader | | | | 0.302* | 0.338* | | | | |
| Industry leader x Dept. aff. | | | | | -0.069** | | | | |
| Past success | | | | | | 0.231** | 0.249** | | |
| Past success x Dept. aff. | | | | | | | -0.040 | | |
| Pioneer | | | | | | | | 0.076 | 0.054 |
| Pioneer x Dept. aff. | | | | | | | | | 0.045 |
| Adjusted R-square | 0.027** | 0.055** | 0.062** | 0.106* | 0.109* | 0.078** | 0.078** | 0.032** | 0.032** |

Note. Number of permutations: 2000

**p ≤ 0.01; **p ≤ 0.05; †p ≤ 0.1*

Table 7 (continued)

MRQAP: Communication (dissimilarity)

| <i>Variable</i> | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
|------------------------------|---------|---------|---------|----------|----------|--------|--------|--------|--------|
| Departmental affiliation | -0.068† | -0.056 | -0.056 | -0.068† | -0.067 | -0.050 | -0.051 | -0.048 | -0.048 |
| Experience | -0.141† | -0.103 | -0.103 | -0.150** | -0.150** | -0.090 | -0.089 | -0.067 | -0.067 |
| Hierarchical position | 0.030 | 0.017 | 0.018 | 0.034 | 0.033 | 0.008 | 0.007 | 0.009 | 0.009 |
| Montreal | | 0.258** | 0.255** | | | | | | |
| Montreal x Dept. aff. | | | 0.006 | | | | | | |
| Local community | | | | -0.059 | -0.048 | | | | |
| Local community x Dept. aff. | | | | | -0.020 | | | | |
| Founder | | | | | | 0.359* | 0.384* | | |
| Founder x Dept. aff. | | | | | | | -0.050 | | |
| Family/team | | | | | | | | 0.366* | 0.365* |
| Family/team x Dept. aff. | | | | | | | | | 0.003 |
| Adjusted R-square | 0.027** | 0.091** | 0.090** | 0.029** | 0.029** | 0.151* | 0.152* | 0.153* | 0.152* |

Note. Number of permutations: 2000

**p ≤ 0.01; **p ≤ 0.05; †p ≤ 0.1*

Table 8

MRQAP: Communication (strength)

| <i>Variable</i> | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
|-------------------------------|---------|---------|----------|----------|---------|----------|----------|---------|----------|
| Departmental affiliation | 0.112** | 0.112** | 0.110** | 0.127* | 0.121* | 0.092** | 0.086* | 0.118** | 0.122** |
| Experience | 0.234** | 0.197** | 0.194** | 0.124 | 0.124 | 0.197** | 0.195* | 0.216** | 0.215** |
| Hierarchical position | -0.015 | -0.003 | -0.001 | -0.016 | -0.016 | -0.007 | -0.010 | -0.009 | -0.010 |
| Quality producer | | -0.217† | -0.289** | | | | | | |
| Quality producer x Dept. aff. | | | 0.131* | | | | | | |
| Industry leader | | | | -0.308** | -0.354* | | | | |
| Industry leader x Dept. aff. | | | | 0.089* | | | | | |
| Past success | | | | | | -0.270** | -0.234** | | |
| Past success x Dept. aff. | | | | | | | -0.076 | | |
| Pioneer | | | | | | | | -0.108 | -0.070 |
| Pioneer x Dept. aff. | | | | | | | | | -0.076** |
| Adjusted R-square | 0.070** | 0.114** | 0.126* | 0.152* | 0.157* | 0.140* | 0.143* | 0.080** | 0.084* |

Note. Number of permutations: 2000

**p ≤ 0.01; **p ≤ 0.05; †p ≤ 0.1*

Table 8 (continued)

MRQAP: Communication (strength)

| <i>Variable</i> | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
|------------------------------|---------|----------|----------|---------|---------|---------|---------|---------|---------|
| Departmental affiliation | 0.112** | 0.101** | 0.101** | 0.117** | 0.117** | 0.010** | 0.010** | 0.096** | 0.095** |
| Experience | 0.234** | 0.187** | 0.186** | 0.237** | 0.237** | 0.184** | 0.185** | 0.157† | 0.156† |
| Hierarchical position | -0.015 | 0.002 | 0.001 | -0.015 | -0.015 | 0.008 | 0.007 | 0.008 | 0.006 |
| Montreal | | -0.332** | -0.328** | | | | | | |
| Montreal x Dept. aff. | | | -0.008 | | | | | | |
| Local community | | | | 0.013 | 0.013 | | | | |
| Local community x Dept. aff. | | | | | -0.001 | | | | |
| Founder | | | | | | -0.358* | -0.351* | | |
| Founder x Dept. aff. | | | | | | | -0.013 | | |
| Family/team | | | | | | | | -0.389* | -0.346* |
| Family/team x Dept. aff. | | | | | | | | | -0.090† |
| Adjusted R-square | 0.070** | 0.176* | 0.175* | 0.069** | 0.068** | 0.193* | 0.192* | 0.212* | 0.217* |

Note. Number of permutations: 2000

* $p \leq 0.01$; ** $p \leq 0.05$; † $p \leq 0.1$

4. RESULTS

Chapter 4 outlines the results of the hypotheses testing and states which of the posited associations of this thesis were supported and which were not supported by our analysis. Initially, analyses of direct effects in the first-order relationships are presented (Hypotheses 1 to 4), followed by analyses of the hypothesized moderating effects (Hypotheses 1a to 4a). The in-depth discussion of this thesis' key findings and the theoretical and practical implications will take place in the next chapter.

4.1 Test of Hypotheses 1 and 2: Agreement about Group Processes

Hypothesis 1 stated that members' dyadic perceptual agreement about attributes defining the organizational identity of La Brasserie would be associated with dyadic agreement about perceived coordination. To test this association, MRQAP was conducted separately for each identity dimension elicited in the qualitative analysis. This hypothesis was partially supported as significant results ($p \leq 0.1$) were obtained only for the *Quality producer* ($\beta=0.212$; $R^2=0.044$) and *Involvement in local community and social events* ($\beta=0.171$; $R^2=0.028$) dimensions. Members' agreement about the attributes labeled *Industry leader*, *Celebrate past success*, *Pioneer*, *Made in Montréal*, *Influence of the founder*, and *Family/team* did not significantly relate to dyadic agreement about perceived coordination processes. This means that dyads where members both highly agree on their perceptions of La Brasserie's identity with respect to a focus on the creation of quality products and as being involved in its local community were also more

likely to have similar interpretations about the way they perceive coordination processes within their organization. The complete results of the MRQAP analysis are in Table 5.

Hypothesis 2 stated that members' dyadic perceptual agreement about attributes defining the organizational identity of La Brasserie would be associated with dyadic agreement about perceived communication. Hypothesis 2 was also partially supported. Members' agreement in dyads about the identity dimensions labeled *Quality producer* ($\beta=0.174$; $R^2=0.055$), *Industry leader* ($\beta=0.302$; $R^2=0.106$), *Celebrate past success* ($\beta=0.231$; $R^2=0.078$), *Made in Montréal* ($\beta=0.259$; $R^2=0.091$), *Influence of the founder* ($\beta=0.359$; $R^2=0.152$), and *Family/team* ($\beta=0.367$; $R^2=0.154$) were significantly associated with dyadic agreement about overall perceived organizational communication quality. Perceptual agreement about the *Pioneer* and *Involvement in the local community and social events* characteristics did not significantly relate with dyadic perceptual agreement about communication. Full results can be observed in Table 7.

4.2 Test of Hypotheses 3 and 4: Strength of Group Processes

Hypotheses 3 and 4 stated that members' agreement in dyads about organizational identity attributes was associated with positive perceptions regarding coordination and quality processes. The same MRQAP analytical technique testing hypotheses 1 and 2 was adopted to test these hypotheses and the regressions were performed separately for each dimension.

Hypothesis 3 was strongly supported as members' perceptual dyadic agreement about the five traits uncovered in the qualitative analysis was in each case associated with

positive perceptions of coordination processes. Thus, the more dyadic agreement was high about La Brasserie's identity being defined as a *Quality producer* ($\beta=-0.547$; $R^2=0.287$), *Made in Montréal* ($\beta=-0.373$; $R^2=0.134$), *Involved in the local community and social events* ($\beta=-0.308$; $R^2=0.091$), *Influenced by its founder* ($\beta=-0.300$; $R^2=0.086$), and viewed as a *Family/team* ($\beta=-0.267$; $R^2=0.067$) the more members had positive perceptions about coordination in dyads. Agreement on the additional attributes included in the exploratory analysis (i.e. *Industry leader*, *Pioneer*, and *Celebration of past success*) did not show any significant association with the dependent variable. All coefficients from the MRQAP are exposed in Table 6.

Mixed support was found for Hypothesis 4. Significant regression coefficients were obtained testing the relation between members' agreement in dyads about La Brasserie being a *Quality producer* ($\beta=-0.217$; $R^2=0.115$), *Industry leader* ($\beta=-0.308$; $R^2=0.152$), *Celebrating past success* ($\beta=-0.270$; $R^2=0.140$), *Made in Montréal* ($\beta=-0.332$; $R^2=0.177$), *Influenced by the founder* ($\beta=-0.357$; $R^2=0.193$), and *Family/team* ($\beta=-0.388$; $R^2=0.212$) and perceptions about organizational communication quality. However, the posited associations that members' perceptual agreement about the identity attributes *Involvement in local community and social events* and *Pioneer* would be positively related with perceptions of communication did not report any significant findings. Table 8 displays the entire results of the model.

4.3 Test of Hypotheses 1a to 4a: Departmental Membership as a Moderator

Hypotheses 1a, 2a, 3a, and 4a aimed to detect potential differentials in the four main postulated associations based on members' departmental affiliation. Some interaction terms did report significant regression coefficients, but overall the results did not support the moderating role represented by membership in the same department or not with respect to the associations expressed in hypotheses 1 to 4. It is interesting to note though that additional exploratory analysis of the interaction between agreement on Quality producer and departmental membership displayed contrasting results in the regressions with both communication agreement and strength.

Hypotheses 1a and 2a specifically stated that the relationships between members' perceptual agreement in dyads about organizational identity dimensions and agreement about perceived group process would exhibit stronger effects when members shared membership in the same formal departmental structure than if they did not. To test these hypotheses, regressions were separately operationalized that included an interaction term in addition to the predicting variable regressed in hypotheses 1 and 2. The interaction term took into account agreement on each identity attribute together with the variable departmental affiliation for every dimension of identity singularly. Overall the tests of hypotheses 1a and 2a did not report significant effects when taking into account membership in the same department. This means that the results obtained in the regressions with the presence of an interaction term did not alter the results previously obtained by regressing members' perceptual dyadic agreement on the individual identity dimension alone. However, the interaction term between the departmental affiliation and

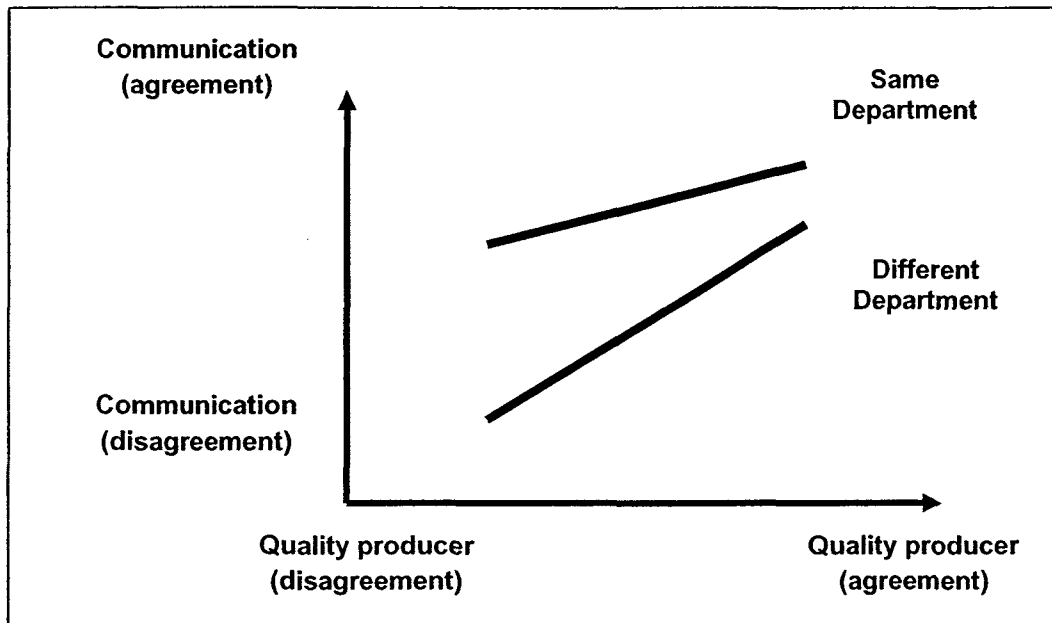
agreement about the *Quality producer* dimension did exhibit a significant coefficient results in Table 5. In a similar way, significant coefficients were obtained in the regression model testing hypothesis 2a for the interaction terms between departmental affiliation and agreement on the *Quality producer* and *Industry leader* attributes can be noted in table 7. To explore these coefficients, an F-statistic test⁴ of incremental variance explained was performed. Only the interaction term between departmental affiliation and agreement on the *Quality producer* dimension in relation to communication dissimilarity in Hypothesis 2a was significant (incremental $R^2=0.062$; $F=3.92$, significant for $p\leq 0.05$). The plot of the interaction effect is showed in Figure 2. Interestingly, this result proved to indicate contrasting findings with respect to the hypothesized association. In particular, agreement in dyads about the *Quality producer* dimension appeared to exhibit stronger effects when members do not share departmental membership in the organization.

⁴ The formula adopted to test the F-statistic is the following, where k denotes the number of variables, subscript 1 refers to the original model and subscript 2 refers to the expanded model:

$$F = \frac{(R_2^2 - R_1^2) / (k_2 - k_1)}{(1 - R_2^2) / (N - k_2 - 1)}$$

Figure 2

Plot of interaction term in hypothesis 2a (*Quality producer* attribute)

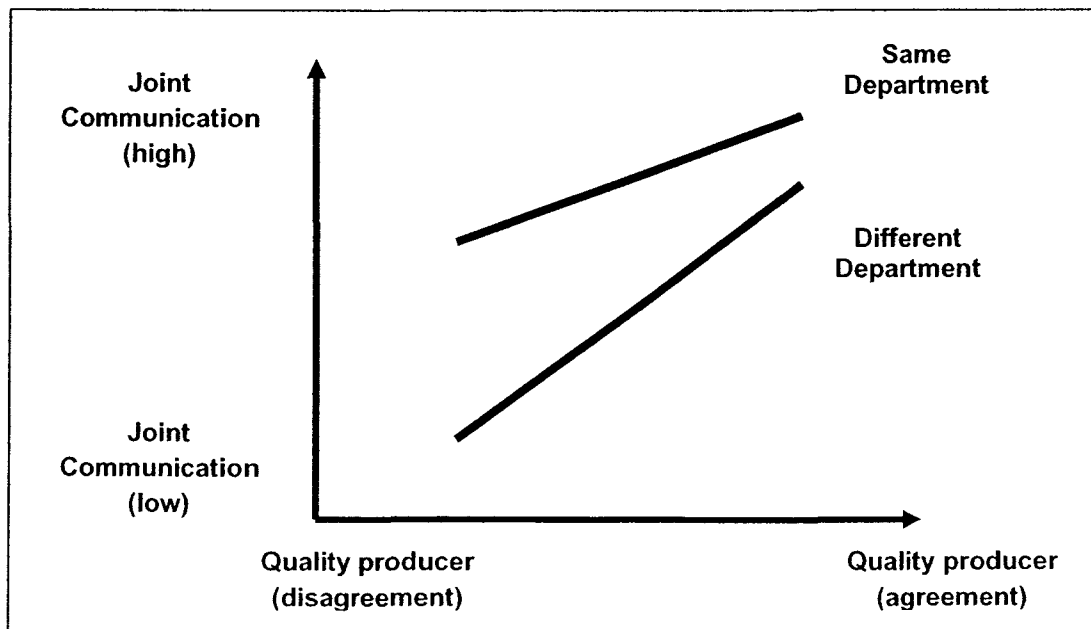


Hypotheses 3a and 4a posited that the associations between members' perceptual agreement in dyads about organizational identity dimensions and respectively the strength of perceived coordination and strength of perceived communication would exhibit stronger effects when members work in the same department than if they did not. The tests were operated with the aid of MRQAP on each identity attribute and the corresponding interaction term with the variable departmental affiliation separately. The two hypotheses were not supported. Significant interaction terms were found in the test of hypothesis 3a in the interaction between agreement on the dimension *Celebrate past success* and the variable departmental affiliation. In the same fashion, the test of hypothesis 4a reported four significant interaction terms between agreement about La

Brasserie's identity defined as a *Quality producer*, *Industry leader*, *Pioneer*, and *Family/team*, and the departmental affiliation variable. An additional exploratory analysis was run by computing F-statistics for the significant interaction terms and, similarly to hypothesis 2a, only the moderating effect of departmental membership proved to explain incremental variance in the relation between agreement on the *Quality producer* dimension and perceived strength of communication (incremental $R^2=0.126$; $F=4.805$, $p \leq 0.05$). This finding also contradicted the initial hypothesis showing stronger effects in dyads where members do not belong to the same department. The graph showing this interaction effect is included below in Figure 3. The full results and coefficient of the interaction terms in the test of hypotheses 3a and 4a are respectively shown in Table 6 and Table 8. I discuss next the nature and implications of these findings.

Figure 3

Plot of interaction terms in hypothesis 4a (*Quality producer* attribute)



5. DISCUSSION

The research questions addressed in this thesis sought to explore if members' shared interpretive schema about organizational identity was associated to coordination and communication processes within organizations. Departmental affiliation of members was also proposed as a moderator in these relationships. To answer these questions, I have focused on the case study of a Canadian microbrewery's identity approaching the phenomenon from a shared mental model or transactive memory system perspective. The hypotheses were tested at the dyadic level of analysis in the field with observations gathered from 35 members of the brewery. Overall, our results suggest some partial evidence supporting the existence of significant associations between members' shared beliefs about perceived organizational identity and their perceptions of coordination and communication processes in the workplace. Testing for interaction effects yielded interesting results, but the role of departmental affiliation did not reflect the position expressed in the formulation of the study's hypotheses.

This chapter offers a summarizing and interpretive view of the results drawing on the theoretical background outlined in Chapter 2. It is divided into six parts. First, the relations found between perceptual agreement about identity and members' perceptions of coordination and communication processes are discussed. Then, the implications of the findings for understanding the current exploration of the organizational identity phenomenon are highlighted. Thirdly, explanations relatively to the tests of moderation are provided. Next, limitations in the methodology are addressed. The practical

implications are discussed in the fifth section. Finally, indications for further research on the topic are acknowledged.

5.1 Organizational Identity and Group Processes

The four principal hypotheses of this thesis (H1 to H4) received mixed, but relatively good support. It was hypothesized that members' perceptual agreement on each organizational identity dimension would be associated with (1) agreement and (2) good perceptions about coordination and communication processes. Of the four hypotheses, only hypothesis 3 was totally supported, stating that members' high agreement on the five dimensions of organizational identity (*Quality producer, Made in Montréal, Involvement in the local community and social events, Influence of the founder, and Family/team*) was associated with good perceptions of coordination processes. Similar results were obtained for hypotheses 2 and 4, where high agreement about four of the five identity dimensions was associated with high agreement and positive strength of perceived communication quality. In both cases, the attribute *Involvement in local community* was not significantly associated with perceptions of communication. This attribute was also the one that occurred with less frequency in the qualitative analysis. It was included in the five identity dimensions because of the importance and the physical presence of a cultural centre annexed to the brewery. The contribution of La Brasserie to the arts and local cultural events was also an element that appeared frequently in the company website as one characteristic feature of the organization. I see two possible explanations of these non-significant results. The first one is linked to the fact that this aspect of the brewery is

closely related to the personality of the President-founder who is an active individual in the development of the social local landscape in the area where the brewery is located. For many years he has been involved in the promotion of arts and cultural events and he has been able to transmit his passion and interests into the organization's activities. It is also possible that this element is not shared across the organization or at least is shared across those members that are more closely related to the President and have been around the organization for many years thus understanding this characteristic of the company. This is evident in the presence of the significant role played by the experience variable (see Table 7 and 8) despite the lack of support for this identity dimension. People who have been present in the organization for many years tend to agree on the importance of this identity dimension for the organization.

The hypothesis that received the least support was the one linking perceptual identity agreement to agreement about coordination processes (H1) in the sense that only two identity characteristics (*Quality producer* and *Involvement in local community and social events*) showed acceptable results. It is noteworthy to mention that members' agreement about the *Quality producer* dimension displayed significant results in all four hypotheses. This finding appears to be consistent with the fact that in all interviews as well as in the text present in the company website the *Quality* aspect of the products is the attribute that is emphasized recurrently as the primary trait of La Brasserie.

The additional exploratory dimensions received little support from the test of hypotheses. Agreement about the *Industry leader* and *Celebration of past success* attributes received support only when associated to communication processes (H2 and H4) while the relation between perceptual agreement about the *Pioneer* dimension and

Table 9

Summary of the results (Hypothesis 1 to Hypothesis 4)

| OI agreement | H1 Coordination (agreement) | H2 Communication (agreement) | H3 Coordination (strength) | H4 Communication (strength) |
|-----------------------------------|-----------------------------------|------------------------------------|----------------------------------|-----------------------------------|
| 1. Quality producer | S | S | S | S |
| 2. Family/team | NS | S | S | S |
| 3. Made in Montréal | NS | S | S | S |
| 4. Influence of the founder | NS | S | S | S |
| 5. Involvement in local community | S | NS | S | NS |
| <i>Industry leader</i> | NS | S | NS | S |
| <i>Celebrate past success</i> | NS | S | NS | S |
| <i>Pioneer</i> | NS | NS | NS | NS |

Note. S: supported
NS: not supported

group processes was not significant in any of the studied cases. Table 9 offers a summarizing view of the findings.

This study provides some evidence that organizational identity can be considered as a shared mental model for members that has an influence on their perceptions of coordination and communication behaviors. This is in line with this thesis' original idea that interpersonal congruence of members' collective sense of identity is associated with group processes that are necessary to members' accomplishment of their daily work routines. Members' representations and beliefs about 'who they are' as a collective can be therefore thought as a mechanism that plays an important role enabling individuals to transmit work-related information smoothly and permits to handle conflicts with proper communication channels. Interpersonal congruence about identity also enables members to work together in a well-coordinated manner and have few misunderstandings about how to proceed in their activities without the need to backtrack and start over. This happens because organizational members have common understandings about the attributes defining their organization and driving the organizational activities of the firm. As the sales manager evidenced: "*Bars and restaurants are complaining about the late delivery of the beer, and even if in production they are saying that the beer is not ready I don't put pressure on them because I know that their focus is on the quality of the beer and we do not want to hurry up the process and deliver an average product*".

The findings of this study share similar points to the perspectives offered by the authors in the reviewed studies in chapter 2. Pratt and Foreman (2000) already discussed how divergent interpretations about identity can often result in difficult decision-making by organizational members. One explanation might be linked to members' lack of

agreement about organizational identity which in turn resulted in poor communication and coordination processes. This issue was even more salient in the previously mentioned Nag et al. study (2007) where business people and scientists had troubles communicating with each other because they couldn't reach cognitive consensus on the features that were core, enduring, and distinctive for the organization.

5.2 Theoretical Implications in the Study of Organizational Identity

This thesis contributes to the study of organizational identity in several ways. Previous studies have explored the effects of organizational identity with respect to other organizational behaviors such as the development of organizational commitment (Foreman and Whetten, 2002). Here, I have offered an in-depth investigation of one particular organization's identity and explored links between perceived organizational identity and members' coordination and communication behaviors.

Some of the concerns highlighted by previous research were also addressed. I have attempted to answer a call to integrate elements from other disciplines in order to bridge the gaps in the organizational identity literature and gain a better understanding of members' perceptions of organizational identity and their consequences (Cornelissen et al., 2007). To do so, some concepts used in the study of shared mental models and transactive memory systems were introduced in this research to enhance our understanding of organizational identity. The current work also expands the work on shared mental models because shared organizational identity can represent an additional facet to be included in the list of comprehensive mental model content dimensions.

Recent studies had also claimed for conceptualizations that acknowledge the impact of organizational identity into members' daily routines in the workplace (Nag et al., 2007). I tried to accept this intuition by linking identity to fundamental group processes that are central to daily work practices.

Finally, a novel research technique that measures and analyzes perceptions of organizational identity at the dyadic level was also used. Throughout this work, the interpersonal and social interactional element inherent in the nature of the organizational identity, coordination, and communication constructs were emphasized. The dyad represents the basic unit of interaction between individuals and was deemed crucial in the operationalization of our research intent. The adoption of measures of convergence or similarity as well as other social network analysis techniques had already been used in research on team mental models (Mathieu et al., 2000), but, to our knowledge, this study is the first to apply similar instruments to investigate agreement in perceptions of organizational identity.

The study's findings have also implications for the two perspectives on organizational identity highlighted in the literature review. First, the set of attributes that were elicited in the qualitative analysis can be seen as the set of central, enduring and distinctive claims through which La Brasserie is attempting to position itself in the external environment. Other breweries might share some of those attributes, but the combination of all the identity traits displays the organization as a unique constellation in the social space. When the informants were asked in the final interview questions to compare their company to others, they constructed a collective sense of self by using La Brasserie's identity as a guide to give sense to their experiences as members of that

particular social entity. Also, the quantitative measurement of organizational identity beliefs based on the interview results has focused on a social actor view of identity when members were asked to rate how important a series of identity statements were important for the management of La Brasserie. Thus, their answers expressed the set of identity claims corresponding to the categories providing a self-referential definition of the organization.

On the other hand, I have operated empirical tests of the organizational identity construct that focused on members' shared understandings and agreement about what their brewery's identity. Here, the focus on measures of agreement at the dyadic level and the interest placed on social processes highlight the social constructionist perspective of organizational identity. Along this thesis, I have emphasized the importance of social interactions and constructions in shaping organizational identity in relation to the group processes of coordination and communication. Identity was viewed as the lens that people use to make sense of their surroundings and interpret their environment as members of the brewery. These assumptions have permitted us to hypothesize associations that linked members shared identity to important organizational behaviors. This view also represents the guiding interpretive frame of the study's results. The implications of membership affiliation and the lack of support in hypothesis 1 (coordination agreement) are discussed under the light of social processes which produces members' construction of shared understandings about organizational identity.

In sum, the two views were important in shaping our assumptions and making inferences about organizational identity. The focus has been put primarily on the social constructionist view of identity because our main intent was to explore implications of

shared identity in relation to members behaviors that take place inside the organization and to account for the social interactive aspect of the studied phenomena. However, with no doubt, the social actor perspective of identity has been central in uncovering the attributes defining the researched organization and investigating the set of institutional claims culminating in La Brasserie's quest for legitimacy in the brewing industry. Together, the social actor and social constructionist views of identity have guided the research question and the creation of the survey instrument that asked members to express what they felt was important in the description of their organization. In this thesis, I tried to explore the identity claims that organizational members use to define the brewery's character and the identity understandings that they share and adopt to develop common interpretations of their environment and interact effectively during their work activities.

5.3 Moderation

In addition to direct effects, this thesis explored the moderating role of departmental affiliation. I hypothesized that the associations between shared perceived organizational identity and perceptions of coordination and communication would be moderated by membership in the same department or not. The MRQAP analysis did indeed exhibit few significant interaction terms in the models that were tested. The hypotheses that members' affiliation to the same department could yield stronger effects in their interpretation of group processes and in the perceived strength of these organizational phenomena not only did not receive support but in some cases were contradicted. In

particular, the results showed that the association between members' agreement about the *Quality producer* attribute and both communication agreement and perceived strength of the group process had stronger effects when members operate in different departments than in the same one. This can be clearly observed in the graphic representations in Figure 2 and 3. In particular, when people are in the same department and when they agree on the importance of the *Quality producer* attribute, they also tend to agree on communication and perceive a high level of communication. However, the slopes of the regression lines indicate that agreement about organizational identity has an impact on communication agreement and strength primarily when members are in different department. This finding might suggest that departmental affiliation could represent an important aspect of identity as a shared mental model in a way that communication processes are affected more by sharing membership in the same functional division rather than agreement about organizational identity. The extent to which people agree about organizational identity within departments and across departments might have been affected by membership in specific departments and by the under-representation of people working in certain areas of the organization. For example, a control variable that took into account membership in each particular department was not included in the analysis (e.g. two members share membership in the brewing department as opposed to two members who share membership in the administration department). In addition, little responsiveness was received from the sales department (19.2%) and this element might have an impact on the results. The nature of the salespersons' profession and their physical detachment from the production location with respect to the other departments is an important factor to be considered. In fact, La Brasserie's sales department represents

the division of the organization where members mostly work alone and are traveling to different locations to promote the company's products. This also reduces the amount of time where they have the occasion to engage in interpersonal interactions with the other members in their department and in other departments of the organization.

This surprising but interesting finding also raises questions surrounding the reasons why, as a group process, communication but not coordination is affected. A suggestive explanation could point to the fact that communication processes at the brewery have more complex social dynamics that go beyond the functional boundaries. People in the organization might have developed over the years informal social ties (e.g., family, friendship) that do not necessarily correspond to the interrelations among co-workers of the same departmental unit. For example, at least three families count two or more members that operate in different departments of the organization. A simpler explanation of this finding might also be due to the small sample size and in the fact that all departments are not fully and equally represented thus rendering the results reflective of a partial depiction of what is going on in the organization.

However, although some interaction terms linking departmental membership with the *Quality producer* dimension were significantly related to the communication construct, main effects of *Departmental affiliation* as a control variable can also be noted in the regression analyses (Table 7 and 8). In the case of the two significant interaction terms above mentioned, evidence points to the fact that dyads composed of two members who work in the same department tend to be directly associated to the level of agreement and perceived quality of organizational communication.

It is also plausible that the absence of differences or partial representations in members' perceptions across departments is linked to the holographic character of La Brasserie's organizational identity (Albert and Whetten, 1985). This means that shared views about what constitutes organizational identity are similar throughout the entirety of the organization instead of being fragmented in diverse interpretations of subgroups within the firm (i.e., ideographic organizational identity).

Differentiation in organizational identity conceptualization can exist along many lines such as hierarchical boundaries, professional boundaries, or many others (Corley, 2004). In this thesis, I have attempted to detect the eventual presence of such divergences according to departmental divisions and acknowledged the role played by hierarchical differences. However, future research is needed that explore other boundaries that might influence divergence in members' perceptions of organizational identity.

Larger samples, though, containing sufficient between-unit variability to assess the effects of unit differences and sufficient within-unit homogeneity are required (Kozlowski and Klein, 2000). In this thesis, analyses were operated at the dyadic level of analysis to increase the number of observations yielding altogether interesting results.

5.4 Limitations of the Study

First of all, this study is limited in its scope because it evaluates only organizational members' perceptions in one company, La Brasserie, which mostly operates in one single geographic location, the Canadian beer market. However, the results of this research can be generalized to other brewing organizations or similar

manufacturing firms because people share experiences, knowledge, and practices within industrial groups by using communities of practice (Wenger and Snyder, 2000).

The sample size and composition generating the quantitative data for the analyses of this study also represents a potential source of limitation. I gathered perceptions from only 41% of members within the organization, and all departments were not fully and equally represented. Therefore, I exhort the reader into careful considerations during the interpretations of the results. This issue has also implications from a multi- and cross-level perspective. Inferences made at a dyadic focal unit can hardly be extended to higher level orders without careful theoretical and methodological considerations. In this research, I have observed a form of social identity at the organizational level by looking at all combination of interpersonal perceptions between two persons within the organization. I proposed to investigate the collective construct of organizational identity at the dyadic level because it constitutes the basic unit of social interactions. Thus, our analyses considered each pair of members and the links between their perceptions about certain social phenomena. On one hand, this has permitted to go beyond the individual level of analysis and obtain some insights about how the studied social phenomena unfold at a more interpersonal level. However, the interconnectedness between individuals in groups is activated through social interchanges of various types that most of the times involved more than two individuals. This might result in a web of social relational processes implying human interaction which is much more complex. The exploration of organizational identity from a dyadic perspective does not have the capability to display completely these dynamics, but certainly proposes an incremental step with respect to individual investigations.

Also, despite the fact that the surveys were distributed to all members of the organization, it is possible that members who did not answer and return the survey have divergent opinions with respect to the respondents. This possibility includes the eventuality that they did not want to report negative perceptions toward their organization even if anonymity and confidentiality were ensured by the researcher. Other explanations for the small sample size could simply be the lack of motivation or linked to the complex nature of the study.

The level of education of the participants also needs a short consideration. The requested demographic information did not include a specific question to this regard, but discussions with the president of La Brasserie about the early drafts of the survey necessitated adjustments in the formulation of the questionnaire items. His concern was related to the low level of education of some members and their difficulty to completely understand the meaning of each item included in the survey. Although the final version of the survey was deemed acceptable and comprehensible and participants had the freedom to answer or not the questions in the survey, I cannot ensure that all participants fully understood each single item.

Another factor that might have affected the study is the timeline in which the research project took place. In the one-year span between April 2008 and April 2009, La Brasserie faced many changes including a major reduction in workforce and a partnership with another microbrewery against which it was previously competing. On one hand, these elements render more salient members' interpretation of organizational identity (Corley and Gioia, 2004; Gioia and Thomas, 1996), but at the same it is plausible that confusion might have arisen in their mind about the future or the identity of their

organization. Such elements of uncertainty could also have been another factor influencing the response rate.

Also, the qualitative analysis resulted in the elicitation of five identity dimensions with the addition of supplementary attributes included in the analysis for exploration. Another potential flaw in the analysis of the survey data is that a factor analysis or other data reduction technique was not performed to test for potential convergence of the identity dimensions. This analytical procedure might be recommendable for future studies adopting similar methods but with a fortunately larger sample.

5.5 Practical Contributions

This thesis also offers important contributions from a practical standpoint. By exploring members' shared understanding about the identity of an organization, the top management of organizations can develop targeted formal and informal messages across the organization to improve important group and organizational processes such as coordination and communication between employees. One example stands in the development of techniques to transmit organizational identity attributes to newly hired members. An investigation of internal members' shared understandings about 'who they are as an organization' can also represent the starting point to create strategies that communicate the identity of the organization to other important stakeholders outside and inside a firm. The current study might also suggest an additional avenue for managers to look at when confronted with problems associated with a lack of effectiveness in group processes such as coordination and communication. Achieving interpersonal congruence

about organizational identity could offer alternative explanations in the interpretation of issues affecting group processes within organizations.

5.6 Future Research

The results from this thesis suggest many directions for future research. The findings suggest links between perceptual organizational identity agreement and perceptions of coordination and communication processes that had not been explored so far. However, little is known about the social processes behind members' agreement about organizational identity dimensions. What are the antecedents that bring members to reach similar cognitive representations about 'who they are as an organization'? What types of formal or informal links foster this cognitive consensus? What is the role of leaders in the organization in influencing the formation of common interpretive schemas about identity? These all represent interesting valid questions to be investigated.

Beyond the present study, it would be relevant to explore if the hypotheses tested in this thesis would be fully supported given a larger sample representing the studied organization. Although it would represent a considerable research effort, a comparison with results obtained from similar investigations in other organizations of the same industry would with no doubt yield important findings.

The organization researched in this study exhibited a close relationship between its culture, identity and founder as manifest by the identity attribute *Influence of the founder* at La Brasserie. Thus, one pertinent avenue of interest deals with the time factor and is related to the development of organizational identity when the founder leaves the

organization or is not a vital part of it anymore: how do the central, enduring, and distinctive features evolve?

Additional promising areas of research also surround the group processes affected by shared collective identity. Other group processes and outcomes such as cooperation or performance could be explored. The communication construct in particular was built around a very broad and generic definition, but some aspects of communication might be differentially influenced by organizational identity thereby requiring further investigations.

The questions mentioned in this section are not exhaustive of the potential ramifications expanding the ideas elaborated in this thesis. But lastly, it is of peculiar relevance for future research that the dyadic agreement analytical approach in this project is surely a novel, but valid method in the study of social and collective identities.

6. CONCLUSION

This case study has contributed to the body of research advancing Albert and Whetten's (1985) conception of organizational identity by exploring associations between members' perceptual agreement about identity and the perceived group processes of communication and coordination. The focus of this thesis was centered on the conception of identity as a shared mental model by the members of one particular organization operating in the Canadian brewing industry.

Some mixed, but positive, support was found reinforcing the idea that shared views about organizational identity are related to positive perceptions of coordination and communication behaviors in the workplace. The methodology adopted to measure members' similarity about perceptual organizational identity agreement constitutes a novel approach to study in the field members' shared answers to the question 'who are we as an organization'.

Although future research is still required in this young but evolving area of study, the current manuscript has yielded interesting results linking identity to group processes that are essential to organizational life.

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APPENDIX A-1

Interview protocol (English version)

A. PERSONAL INFORMATION

- What is your job title?
- How long have you worked at 'La Brasserie'?
- Describe your personal meaning of your involvement with beer and the beer brewing industry?

B. INSIDERS

- What does it mean to you to be a member of "La Brasserie"?
- When you talk about "La Brasserie", what character traits do you use to describe it?
- Describe an event that has shaped your beliefs about the character/ identity of "La Brasserie"? How did this event affect your perceptions of identity?
- How do your employees/managers talk about La Brasserie's identity and what the brewery means to them? And your colleagues?
- How does the way your colleagues/employees describe the identity of La Brasserie affect the way you think about it?
- What would you like the identity/character of La Brasserie to be like?

C. OUTSIDERS

- What do you hear people outside the firm say about "La Brasserie"?
- What do you think people outside the firm actually think about "La Brasserie"?
- Who are the most important outsiders whose thoughts and opinions about "La Brasserie" matter to you?
- What are some important ways in which what outsiders think or say about "La Brasserie" affect the way you think about it?

D. OTHER BREWERIES

- What are some breweries that you think can be compared with yours in terms of their identity and/or the way people think and talk about them?
- What makes your brewery's identity similar to (each one of) these other breweries?
- What makes your brewery's identity unique and different from (each of) these other breweries?

APPENDIX A-2

Interview protocol (French version)

A. INFORMATIONS PERSONNELLES

- Quel poste occupez-vous?
- Depuis combien de temps travaillez-vous à La Brasserie?
- Qu'est-ce que ça veut dire pour vous d'être impliqué dans le domaine de la bière et de l'industrie brassicole?

B. PERSPECTIVES DES EMPLOYÉS

- Que signifie pour vous d'être un membre de "La Brasserie"?
- Lorsque vous parlez de "La Brasserie", quels traits de caractère utilisez-vous pour la décrire?
- Décrivez-moi un événement qui a façonné vos croyances par rapport au caractère/identité de "La Brasserie".
- De quelle façon cet événement a-t-il affecté vos perceptions par rapport à l'identité de "La Brasserie"?
- De quelle façon est-ce que vos employés/gérants parlent de l'identité de "La Brasserie" et de ce que signifie la brasserie pour eux?
- De quelle façon vos collègues parlent-ils de l'identité de la Brasserie et de ce que signifie la brasserie pour eux?
- Comment est-ce que la manière dont vos collègues ou employés décrivent l'entreprise et son identité affecte vos propres pensées de "La Brasserie"?
- Comment aimeriez-vous que l'identité/caractère de "La Brasserie" soit?

C. PERSPECTIVE EXTERNE

- Qu'entendez-vous les gens en dehors de l'entreprise dire à propos de l'identité de "La Brasserie"?
- Que pensez-vous que les gens en dehors de l'entreprise pensent de l'identité de "La Brasserie"?
- Quelles sont les personnes en dehors de l'entreprise dont les opinions et croyances concernant "La Brasserie" vous importent le plus?
- De quelles façons est-ce que les gens à l'extérieur de l'entreprise pensent ou disent de l'identité de "La Brasserie" affectent-ils ce que vous en pensez?

D. AUTRES BRASSERIES

- Quelles sont les brasseries que vous considérez comparables à la votre du point de vue de leur identité ou de la manière dont les gens en parlent/pensent?
- Qu'est-ce qui fait que l'identité de votre brasserie soit semblable à chacune de celles que vous venez de nommer?
- Qu'est-ce qui fait que l'identité de votre brasserie soit unique et différente de celles-ci?

APPENDIX B-1

Coordination items (English)

The following questions ask about your daily communications with other staff at La Brasserie. Please indicate your agreement with each of the following statements using the following scale. If you find that the statement does not apply to you, please choose N/A.

1= STRONGLY DISAGREE

2= DISAGREE

3= NEITHER AGREE NOR DISAGREE

4= AGREE

5= STRONGLY AGREE

1. I am comfortable accepting suggestions from people of other departments.
2. I trust the information that people from other departments bring to any discussion.
3. When people from another department give information, I want to double check it for myself. (reversed)
4. When dealing with people from another department, our department needs to backtrack and start over a lot. (reversed)
5. Our department has a lot of misunderstandings when working with people from another department. (reversed)
6. Our department has many misunderstandings about how to accomplish our tasks. (reversed)
7. In doing our work, our department needs to backtrack and start over a lot. (reversed)
8. We accomplish our tasks smoothly and efficiently.
9. In our department, people work in a well-coordinated fashion.
10. In our department, there is much confusion about what tasks we should accomplish. (reversed)

APPENDIX B-2

Coordination items (French)

Les questions suivantes vous demandent des informations à propos de vos interactions avec vos collègues. Je vous prie de penser à vos activités quotidiennes au travail et d'indiquer votre accord ou désaccord, ainsi que votre opinion pour chacun des énoncés suivants. Si l'énoncé ne s'applique pas à vous, veuillez choisir l'option N/A.

- 1= PAS DU TOUT D'ACCORD
- 2= PAS D'ACCORD
- 3= NEUTRE
- 4= D'ACCORD
- 5= COMPLÈTEMENT D'ACCORD

1. Je me sens à l'aise d'accepter les suggestions qui viennent d'employé(e)s travaillant dans d'autres départements de La Brasserie.
2. J'ai confiance aux informations que les personnes qui travaillent dans d'autres départements apportent durant les discussions.
3. Quand des employé(e)s d'autres départements de la compagnie me donnent des informations, je préfère les vérifier moi-même. (reversed)
4. Lors des interactions avec d'autres départements, notre département avance plus lentement et doit souvent recommencer le travail. (reversed)
5. Notre département a beaucoup de malentendus quand il interagit avec d'autres départements. (reversed)
6. Les employé(e)s de notre département travaillent bien ensemble et de manière coordonnée.
7. Notre département a beaucoup de malentendus sur la façon dont le travail doit être fait. (reversed)
8. Notre département avance lentement et doit souvent recommencer le travail. (reversed)
9. Nous accomplissons nos tâches efficacement et sans problèmes.
10. Il y a beaucoup de confusion dans mon département sur la manière d'accomplir nos tâches. (reversed)

APPENDIX C-1

Communication items (English)

The following questions ask about your daily communications with other staff at La Brasserie. Please indicate your agreement with each of the following statements using the scale:

1= STRONGLY DISAGREE

2= DISAGREE

3= NEITHER AGREE NOR DISAGREE

4= AGREE

5= STRONGLY AGREE

1. The way people talk to each other at La Brasserie motivates us to reach company goals.
2. Work-related conflicts are handled appropriately through proper communication channels.
3. The people in my company communicate well with each other.
4. People at La Brasserie make sure that others get important information on time.
5. Communication with each other in my company is accurate and free-flowing.
6. People at La Brasserie are able to talk about and clear up any work-related misunderstandings or conflicts.
7. Written memos and reports in my organization are clear and exact.
8. The amount of communication among people in my organization is about right.
9. Informal communication is active and productive.
10. Person-to-person communication at La Brasserie makes all staff feel a part of the company.
11. Company communications are interesting and helpful.

APPENDIX C-2

Communication items (French version)

Je vous prie de penser à vos activités quotidiennes au travail et d'indiquer votre accord ou désaccord, ainsi que votre opinion pour chacun des énoncés qui suivent.

- 1= PAS DU TOUT D'ACCORD
- 2= PAS D'ACCORD
- 3= NEUTRE
- 4= D'ACCORD
- 5= COMPLÈTEMENT D'ACCORD

1. La manière dont les membres de La Brasserie parlent entre eux au travail motive et stimule le respect des objectifs de la compagnie.
2. Les conflits de travail sont réglés de manière adéquate en utilisant les bons moyens de communication.
3. Les membres de La Brasserie communiquent bien entre eux.
4. Le personnel de mon entreprise s'assure de recevoir les informations importantes à temps.
5. La communication entre les membres de La Brasserie est précise et libre.
6. Les membres de La Brasserie réussissent à résoudre tous les conflits de travail et malentendus.
7. À La Brasserie, les communications écrites et les rapports sont clairs et concis.
8. Le niveau de communication entre les membres de La Brasserie est suffisant.
9. Les communications informelles entre les membres de La Brasserie sont actives et productives.
10. La communication interpersonnelle au sein de ma compagnie me fait sentir que je fais partie intégrante de La Brasserie.
11. En général, les communications de la compagnie sont intéressantes et utiles.

APPENDIX D-1

Organizational identity items (English)

Please indicate how much importance management at La Brasserie place on each of the following on a scale of 1 to 5, with 1 meaning 'not important at all' and 5 'very important'.

1. Maintaining high product quality standards
2. The quality of the ingredients
3. Being an industry leader
4. Setting an example for other breweries
5. Celebrating past company success
6. Being a pioneer for microbreweries in Québec
7. Being a Montréal company
8. Involvement in the local community
9. Support for local cultural and social events
10. The president-founder's personal presence in the company
11. Commitment to family values
12. Working together as a team

APPENDIX D-2

Organizational identity items (French)

S.V.P. veuillez évaluer l'importance que les dirigeant(e)s de La Brasserie donnent à chacun des énoncés suivants, utilisant une échelle allant de 1 à 5, où 1 indique 'pas du tout important' et 5 'très important'.

1. Maintenir des standards très élevés concernant la qualité des produits
2. La qualité des ingrédients
3. Être un leader dans l'industrie
4. Être un exemple pour d'autres brasseries
5. Célébrer les succès de la compagnie
6. Être un pionnier pour les microbrasseries au Québec
7. Être une compagnie Montréalaise
8. Être engagé dans la communauté locale
9. Soutenir les événements culturels et sociaux locaux
10. La présence personnelle du président-fondateur dans l'entreprise
11. Respecter les valeurs familiales
12. Travailler ensemble comme une équipe

APPENDIX E-1

Information letter (English)

Dear staff member,

I am a student at Concordia University and I am writing to ask you to take part in a research study about people in the beer brewing industry. I want to know about how you communicate with others in your company. Participating in this research project involves completing a survey that will take about 10 to 15 minutes of your time.

By filling out this survey and sharing your opinions, you will help me complete my University studies. In return, I will provide you with a summary of what I found.

Your participation in this study is completely voluntary and confidential. It is totally up to you to decide whether you want to complete the survey or not. Your answers to the survey questions will be seen only by me and my university supervisor, and to protect your personal identity, all information from this study will be reported in summary format only.

Thank you in advance for helping me with this important research. It is only with the help of people like you that I can complete my studies.

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APPENDIX E-2

Information letter (French)

Cher(e) membre de La Brasserie,

Je suis un étudiant à l'université Concordia et je vous écris pour vous demander de participer à un projet de recherche que je conduis dans l'industrie de la bière. Je suis intéressé à la façon dont les membres de la brasserie communiquent entre eux. Pour participer à cette recherche, vous n'avez qu'à remplir un questionnaire qui dure environ de 10 à 15 minutes.

En remplissant ce questionnaire et en partageant vos opinions, vous m'aidez ainsi à compléter mes études universitaires.

Votre participation à cette étude est entièrement confidentielle et volontaire de votre part. La décision de participer ou non dépend entièrement de vous. Vos réponses ne seront divulguées à aucune autre personne à part moi et mon directeur de thèse, et, afin de protéger votre identité personnelle, toutes les informations seront unies sous forme de compte-rendu.

Je vous remercie à l'avance de votre aide dans cet important projet de recherche. C'est seulement grâce à des personnes comme vous que je serai capable de terminer mes études universitaires.

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